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THE

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OF

MEDICINE AND SURGERY,

AND

Collateral Branches of Science.

CONDUCTED BY

WALTER CHANNING, Jun. M.D.,

AND

JOHN WARE, M.D.

Vol. XIV.

> Homo naturæ minister et interpres tantum facit et intelligit, quantum de naturæ ordine, re vel mente, observaverit; nec amplius scit aut potest.
>
> FRANCIS BACON.

THIRD SERIES, Vol. IV.

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The Practical History of a New Epidemical Eruptive Miliary Fever, with an Angina Ulcusculosa, which prevailed in New-England in the Years 1735 *and* 1736.—By WILLIAM DOUGLASS, M.D.*

THIS Distemper did emerge 20th *May*, 1735 in *Kingston* Township 50 Miles Eastward from *Boston;* it was no foreign importation, *Kingston* being an inland place, of no Trade or considerable communication. The first seized was a *child who died in three Days Illness;* about a Week thereafter in another Family at four Miles distance, three Children were seized successively, and died also the third Day it continues spreading gradually in that Township, seizing here and there particular Families with that degree of violence, that *of the first circiter forty decumbents none recovered* as we were informed. It was vulgarly called the *Throat Illness*, or *a Plague in the Throat*, and alarmed the Provinces of *New-England* very much. Some died of a sudden or acute *Necrosis;* but most of them by a *Symptomatick affection of the Fauces or Neck;* that is by *Sphacelations* or corrosive *Ulcerations* in the *Fauces*, or by *an infiltration and tumefaction* in the

---

* Boston N. E. Printed by Thomas Fleet 1736. We have been requested to republish this Essay, which is, we believe, entirely out of print. We do it very readily from our belief in its value, as it has been pronounced by competent judges one of the best works extant upon the subject of which it treats.—Ed.

Chops and fore part of the Neck, so turged, as to bring all upon a level between the *chin* and *sternum*, occasioning a *strangulation* of the Patient in a very short time.

After a few Weeks it spreads into the neighbouring Townships, but with more mildness. The first *appearance* that we can recollect of it in *Boston*, was 20th *August* on a Child of Capt. *Stannys* at the North End; having *white specks* in the Throat, and a *cutaneous efflorescence:* A few more in the same Neighbourhood were seized in like manner, about the same time. Towards the end of *September* it appeared in several parts of the Town, with a complaint of *soreness in the Throat, Tonsils swelled and speckt, Uvula relaxed, slight Fever, flush in the Face, and an Erysipelas like efflorescence on the neck, chest and extremities;* but being of no fatal or bad consequence, nothing more than a common cold was suspected. Our first alarm was from a young man *How* Æt. 20 in the beginning of *October:* His *History* runs thus; He was lately arrived from *Exeter* to the Eastward, where his Brother died of this Illness; his *Symptoms* were great prostration of Strength, a speck in one of the *Tonsils*, colliquative *Sweats*, *Pulse* not high and full, but low, hard, stringy, unequal and more frequent than natural, *deglutition* good to the last, no *Sphacelation* in the Throat, no eruption; from a rash inconsiderate opinion of forcibly quelling the *Malignity*, he was thrice let Blood, had some Emeticks and Catharticks administered, and *by profuse evacuations was gradually reduced, so as to die of a gentle decay of natural Strength*, the 6th Day of Illness.

Beginning of *November* it spread considerably in *Boston*, especially amongst *Children*, with more violent Symptoms, and severals die of it in various Periods: it seemed to be at the hight, as to Numbers ailing and quantity of Deaths, the second Week of *March;* that Week there were 24 Burials, whereas *communibus annis* in that Season they are only 9 or 10 *per* Week.

It is generally in so considerable a degree *more favourable in Boston*, than in the Townships where it first prevailed; that many can scarce be persuaded of its being the same Distemper: It is nevertheless essentially the same, there is no Symptom, even the most malignant that has appeared in *New-Hampshire*, but what the like has occurred in *Boston*. Perhaps *Boston* dry healthy air, good feeding, constitutions less *Psorick*, and the better management of the Sick, favoured us; the reasons for its proving more mortal in the other Towns, may be, the Country woodland and fresh water damps, (the *Sheep* in fenny lands are most susceptible of and suffer most by the *Rot*) their coarse Food, salt Pork diet, *Psorick* Constitutions, (which is one of the principal *Endemial distemperatures in New-England*) bad Lodgings, and that *Mischievous Practice* of using this Distemper with profuse evacuations, whereby the laudable and salutary *cuticular* eruption has been so perverted as to be noticeable only in a few, and in these it was called a *Scarlet Fever;* the great prostration of Strength essential to this Distemper is so much increased, as to render *Nature* an under match for the assaults of this Illness and its consequences. In fact to the Eastward in some Country Towns, at certain times have died 1 in 3 of the Sick, in others 1 in 4, in scarce any fewer than 1 in 6, whereas in *Boston* not above 1 in 35 have died.

As in most *Epidemical* acute Illnesses, especially *eruptive Fevers*, (witness the *Small Pox*) so in this, are very many varieties or degrees, from the most gentle and *benign* to the most *malignant.* *Symptoms* did vary chiefly from something inscrutable in the *Constitutions* of Families and Persons; the *Scropholous and Psorick* were the most susceptible of it, and did suffer most by it; the *Regimen* had a considerable influence, here some who might have survived the *natural Symptoms* did succumb by profuse U. S. and other evacuations, one of the most essential Symptoms of this Distemper (as before hinted) being *great prostration of Strength.* In so great variety it is not possible to give any concise *scholastick* description, which may comprehend all: We shall therefore, as a *Standard* first describe the most frequent sort, as it appeared in good constitutions.

A previous *listlessness*, and languishing countenance for a Day or two, or some other *prœnuncia* as u. g. wet Nurses loosing their Milk. The first attack is somewhat of a *chill* or shivering; soon after follows *head ake* or some other versatile *spasmodick pains*, as pain in the back, joints, side, *&c*; a vomiting or *nausea*, or in some constitutions which are not easily provoked to vomit, only a certain uneasiness or sickness at Stomach; at the same time the *Uvula* but chiefly the *Tonsils* were tumified, inflamed and painful, with some white *specks;* then follows a flush in the Face and some *miliary eruptions* there, with a benign *mild Fever*, the same efflorescence soon after appears on the neck, chest and extremities; the 3d or 4th Day, Eruption is at the hight and well defined with fair intervals; the flushing goes off gradually, with a general *itching;* and in a day or two more the *cuticle* scales or peels off, especially in the extremities: At the same time the cream coloured sloughs or specks in the *Fauces* become loose and cast off, and tumefactions there do subside. The tongue from the beginning is fur'd as in a *Mercurial ptyalism*, urine high coloured, Blood by U. S. more *florid* than natural, in the whole course of the distemper a very *great prostration of Strength*, and faintness upon recovery, *nervous pains* and weakness in the joints, particularly in the neck, wrists and ancles; universal tenderness to the touch; a tickling guttural cough, some short *Hectick flushings*, and loss of *en bon point*. As in the Measles there is a peculiar smell, so in our Distemper the *effluvia* from the Patient have a proper smell; in Children as if troubled with *Worms*, in grown Persons the *rancid smell* of foul Bed Linnen. The *alvine excrement* is of a dark cast and very fetid.

This Standard kind when left to nature, with a warm soft *Regimen*, had generally an easy and salutary course in six or seven days; but when by a hot cordial method, or on the other extreme, by being too much exposed to the cold, or by officious *profuse evacuations* Nature was disturbed in her Work; the Distemper was protracted, or some consequential ails from an imperfect defecation ensued.

Where Nature required any assistance, the principal *intentions* were with regard to the cuticular eruption and the *ulcuscula* in the Throat. Any Affection of the Throat does frequently produce a natural *ptyalism: Mercurials* used with discretion are a kind of specifick in such like ulcers and *ulcuscula*, and in fact here they moistned the Throat and Mouth, stopt the spreading of the *ulcuscula*, and promoted the casting off of the sloughs; and as an accessory advantage (the Patients being mostly Children) *destroy'd Worms:* amongst all its preparations *Calomel* answered best, the gentle vomiting or few stools that it occasioned in some, did not confound the natural course of the Distemper: *Turbith* proves generally too strong a revulsion, and the Eruption is thereby too much diverted; this Distemper did not well bear any other evacuations but *Mercurials*. Any detergent *Gargle*, with an addition of the *Tincture of Myrrh and Aloes*, was of good use, especially for the *Ulcuscula*, and did promote the discharge of a ropy Phlegm lodged in the *Fauces*. As to the *cuticular efflorescence*, it was not a scarlet *suffusion*, but a *miliary* palpable eruption, or in lieu thereof in some constitutions a continued gentle breathing *Sweat;* and in a very few, who have naturally a *liberior transitus* by the *Pores* than is usual, no sensible cuticular excretion; in all the morbid *effluvia* discovered themselves by their peculiar smell: These were with good effect sollicited by *Snake-root Tea;* or (as in some Persons) where this did occasion an *ardor* or burning heat, instead of a breathing mellow Sweat, *Sp. C. C.* or any other volatile Spirit in small Herb Teas answered well. *Blisters* and *Suppedanea*, in the beginning where Symptoms were not violent, occasioned a protracted Eruption; in some immediately upon their application, the Eruptions vanished or became less vivid. When the Eruption began to decline a few *loose Stools* were very refreshing. The Patient being up, and having recovered a competent degree of Strength, is *to be purged* once or twice, to carry off any feculency that may have remained in the Blood and Juices.

For a more distinct conception of the *varieties in this Distemper*, they may be reduced to three *Classes*.

I. Those who die the first, second and third day of Illness, by an irremediable *Necrosis of the Oeconomy*: in such the Seizure is generally sudden, a sinking pain at the Stomach, an extreme prostration of Strength, a titubating low pulse, in some a stupor, in others a delirium, in some children convulsions, and all of them generally die dozie: they are attended with some *colliquation*, as continued vomiting, purging, profuse Sweats, bloatedness of the habit, an infiltration like that of the *Mumps* vulgarly so called, one or more of these: in general the texture of their blood and juices is much destroy'd and rendred an incoherent puddle of corruption; in fact immediately upon (sometimes before) their *exit*, they have an intolerable *fœtor*. In this Class U. S. and other evacuations did accelerate death.

II. Those where the distemper has its common or ordinary course; here the 6 or 7 day seems to be *critical*, and the Symptoms of death or recovery do generally then begin to manifest themselves. Some by peculiarity of constitution, and from improper administrations do die or have an incipient recovery sooner: others for the like reasons or some particular accidents (u. g. if about the time of regular *menstruation*, the complicated fret occasions worse Symptoms, and of longer continuance) have this period protracted and in such (where death is inevitable) the Symptoms of death may continue a day or two longer, that is the Patient may die the eighth or ninth day. All who continue Ill after that period, belong to the third Class, that is of consequential ails.

The Symptoms of *bad Omen* in this Class, are very great prostration of strength, dejection and despondency of mind, titubating low pulse, incessant vomitings purgings or sweats, Tonsils much inflamed endangering strangulation, the specks in the *Fauces* of a brownish or leaden colour, or ragged and jagged, a continued *jactantia* in some, in others *a stupor*, refusal of *assumenda* even of diluting common drinks, a dry parched skin, Eruptions appearing and disappearing alternately, Eruption universal of a dark redish cast continuing *crude* many days (because in this as in all eruptive Fevers, the darker or more livid the efflorescence, the more malignant) where the *miliary* pustles are large, distinct and pale like a *chrystaline Small-Pox;* where strong Cordials and *Alexipharmicks* have been used, the face, eye-lids, arms, hands, legs, feet swell, and are of a dark red complexion, as in the most malignant Small-Pox; in children if the *velum Pàlati* be much affected, with an *ichorous* discharge by the Nose; where many *mucous* linings are expectorated, resembling the cuticle raised by Vesications; when *pus* was brought up, where no sloughs or exulcerations could be seen in the *Fauces;* where without any difficulty in swallowing, this affection has reached down the *Bronchia* unto the Lungs with the Symptoms of a *New-England Quinsey*, and was erroniously deemed such: the deeper in the *Thorax* the complaint the greater the danger: in some young children with scarce any appearance in the Throat, spreading Ulcers did form behind the Ears in the place where Infants have a natural Issue or running. In some the Tongue did throw off a slough or *Exuvia*, retaining the impressions of the Papillæ; being a *Mucus* inspissated, and of the same nature with those mucous linings expectorated from the *Bronchia* or *Oesophagus*. Some have had impostumations in the *Fauces*, with a fatal strangulation, while others have escaped by the discharge of *Ichorous* curdly matter. Some especially of the adult female kind, have had *Hysterical* or Nervous Suffocations; but of no bad consequence, unless officiously and ignorantly treated with U. S. and other evacuations.

The Fever is seldom too high, sometimes it is too low for a thorough laudable Eruption. If the Fever is too high, if the patient is plethorick or accustomed to U. S.; take away some Blood but with discretion; if the *Tonsils* are much inflamed with great pain and difficulty in swallowing, use U. S. in the *Jugulars*, Epispasticks ad *Nucham*, encourage the Eruption, or its *succedaneum* a breathing sweat; a profuse *sudor* is equally to be avoided as a continued *Diarrhœa*, either of them confound the distemper in its natural course. In case of colliquations give *ol. Cinamomi, decoct. Alb. Elixir Vitriol, torrified Rhubarb* and the like. As to the specks or sloughs in the *Fauces* (they cast of in course in the benign kind) *Mercurials* inwardly, and the *Gargles* before mentioned topically, are useful; the practice in some Country places of separating them forcibly by *spatulas* is hurtful because the irritation occasioned thereby induces a further flux upon the part, and the sloughs form again worse conditioned than before. Where the Brain is affected as in *Vigiliæ, jactantia, delirium, Coma, stupor*, &c; glysters, Vesicatories & *suppedanea* are to be used. Where faintness or great prostration of strength, give toasted Bread soaked in some generous Wine and Water, or volatile Spirits in their common drinks; *Bezoars, Testacea* and the like are of no use, the Shop *Cordial Juleps* and mixtures are only sugar'd drams. To enumerate all the other accidental Symptoms which do happen here, in common with other acute diseases, would be trifling.

III. *Consequential ails*, which may be enumerated as in the following articles.

1. *The natural Effects of an intense corrosive scorbutick like colliquation of the Blood and Juices. Anasarcous* swelling or blotedness of the face, in some to that degree as to shut up the Eyes; the same *Oedemetous* swellings in the extremities; in a few an Infiltration in the *Scrotum*, in some *Petechiæ*, Purple spots, scorbutick like *sugillations* upon the least scratch or bruise; *hæmorrhages* of all sorts, by the Nose, from the Lungs in expectoration, by Stool, by Urine, *Profluviums* in Women *tempore non debito;* these are dismal *phænomina* in the state of any acute Fever, u. g. *Small-Pox*, and scarce any recover; but in our distemper being only short temporary consequential ails, scarce any of them proved mortal, but gave way to a soft milk diet, in some to *Cortex Peruv.* or *Elixir Vitrioli* in others; a Girl æt. 14. with hæmorrhages of several sorts, with Purple spots, and scorbutick like sugillations, recovered, notwithstanding of a very loose *Regimen.* N. B. These were not to be attributed to the *Mercurial* administrations, because they equally happened to those who had taken no Mercury.

2. *Where the defecation has not been compleat*, from want of natural strength, or from catching cold, or from undue evacuations: the *reliquiæ* were thrown off by *Urtications*, by *Vesications* in several parts of the Body, by *serpiginous* eruptions chiefly in the face, by purulent *Pustules*, by Boils, by swellings and *impostumations* in the groin, armpits and other parts of the Body. The most frequent consequential ail of this kind is, when from cold received, the *glands* and cellulary tegument called the *panicula adiposa* in the fore part of the neck becomes infiltrated and obstructed; if not soon resolved by the continued fotus of warm woollens and hot animating applications; the induration increases and spreads

every way, so as to suffocate some, in others they sphacelate and become Ulcers mortal or of difficult cure: thus a few have died with us in *Boston*, but many in the Country. By catching cold likeways the *Tonsils* have afterwards inflamed and come to suppuration: In a young Woman the *Tonsils* and *Uvula* being much ulcerated, did unite and coalesce into one mass and remain so; this might have been prevented by frequent gargling.

While these indurations are only in the form of *Kernels* as they are vulgarly called, woollen mufflers, *Empl. de Ranis cum Mercurio* and the like, with gentle *Cathartícks*, soon resolves them. *Cataplasms* in this case have done much mischief; because so soon as they are become cold, they act as a chilling damp upon the part, and destroy its vitality. When they arrive to the state of putrid flaccid Ulcerations, digestives and soft fomentations intenerate the part and occasion the Ulcer to spread; spirituous animating desiccative dressings have done better. Exposing the part to the cold, either in state of Tumefaction only, or in the subsequent exulcerations aggravates the ail.

3. *From the violence which the Nerves have suffered in this Illness;* even where the Symptoms were apparently mild, they all complain of great faintness and Universal weakness, particularly in the joints. Some Women have Hysterick affections, in a few upon recovery imbecility of mind or silliness, in some stammering or loss of Speech for a few days, some have had short fits of Melancholy, some were seized with Epileptick fits, but not so as to become habitual. All these disorders soon vanished, as the Patient recovered his Strength in course of time, and by the help of a restorative cordial *Regimen* and diet.

4. *Other consequential ails in common with other fevers;* particularly where the Strength of nature has been much impared by the distemper it self, or by immoderate evacuations, the Patient is left in a languishing weakness. Where the Eruption has been impeded by being exposed to the cold, or by unseasonable. *U. S.* or *Cathartícks;* the patient falls into *Hectical wastings*, fatal to some in a very short time. All who underwent immoderate evacuations, were a long time in recovering of their Strength.

SCHOLIA or some general remarks upon the whole.

1. *This seems to be a new kind of Epidemical disease.* It is not the same with the *Aphthæ* which have at times prevailed in *Holland*, as described by *Forestus*, and mentioned by *Boerhaave* in his Colleges. *Tournefort* says there is a distemper

not uncommon in the *Levant*, *viz* a Carbuncle or plague sore in the bottom of the Throat; it carries off children in a few days, but does not affect grown People as does ours. Capt. *Morton* of late *Plymouth* Colony, who wrote many years ago his *New England Memorial*, says that an. 1650. a disease in the Mouth and Throat prevailed, which proved mortal to many in a short time; but he does not describe it, and mentions nothing of a Fever. In *Boston November* 1719. a slight miliary fever chiefly with children, but was over in two or three days, unless by catching cold it continued appearing and disappearing alternately for some days longer; there was no complaint of the Throat, and no deaths ensued. It is not the same with the sore Throats which are observed from time to time in some of our Country Towns, especially in the Winter season: these are Endemial and constitutional, being tumefactious and exulcerations with fluxion in the *Fauces* and Neck; proceeding from an intense scrophulous, scorbutick, or *Psorick* habit (in such subjects vesications by *Cantharides* did putrifie) without any Eruptive fever: ours have generally an Eruptive fever or tendency that way, so that of those who have died in *Boston*, not above one in seven died of any Throat ail, but of this fever. It is however observable that the Scrophulous and Psorick, are most susceptible of this distemper, and suffer more remarkably.

2. *This Epidemical distemper is no creature of the Seasons*, it having prevailed from *May* 1735, when it first emerged, the whole year or all the Seasons round. *It is no produce of peculiar climates and soils*, because it hath made its appearance in various places from *Pemaquid* in 44 N. Lat. to *Carolina* Southward, and as we are lately informed, it is in our *West India Islands*. It is remarkable that in damp places, as near large Ponds, fresh water Rivers, woodlands, and the like, it has done the greatest execution, as does the *Rot* amongst *Sheep* in fenny Lands.

It is not personally infecting after the rate of the Plague, Small-Pox, &c. where every Person is susceptible, excepting a very few *anomolous* constitutions. Children are the most obnoxious to any infection; but with us several Children in the family, where the distemper appeared, have escaped: it is true where it happens in a family, it frequently seizeth severals, as is the case with our Country *Peripneumonick Fevers*, and our Autumnal remitting slow Fevers, which cannot be said to be contagious. The distance in time of Infection to be supposed received from a sick Person, to the time of the distemper's appearing in the supposed infected, could never, with any reasonable allowance of latitude, be reduced to any rule, as in Small-Pox, Measles, &c. We have *Anatomically* inspected Persons who died of it with so intense a *fœtor* from the violence of the disease, that some Practitioners could not continue in the room; but without being infected our selves or carrying it into families. Many children without reserve, frequent the houses and chambers of the sick, and escape. *It does therefore proceed from some undiscovered quality of the air, affecting only peculiar constitutions of persons and families:* notwithstanding of its being generally favourable, it proves fatal to certain families; many families for this reason have buried all or most of their children, u. g. *Boynton* of *Newbury-Falls* lost his eight children, at *Hampton-Falls* in 5 families died 27 Persons.

3. *This is a very anomalous Illness*, some complain a day or two before they are confined, some are seized as it were instantaneously, it is generally most severe with these last. In some a soreness of the Throat and darting pain there, reaching the Ears, is previous to all other Symptoms; in others the common Symptoms of a fever appear, before any inflammation or specks are perceivable in the *Fauces*. Some have a sore Throat without any perceivable eruption, only a gentle breathing continued Sweat, or an increased insensible perspiration with the peculiar smell of the morbid *effluvia*. Some (but very few) have the cuticular eruptions without any sloughs in the Throat; only the *Tonsils, Uvula and velum Palati*, tumified and inflamed; and in a few, *a purulent* discharge from some parts deeper than the *Fauces*, that is lower than the sight can reach, these are not without danger. Many of those who died early of a *Necrosis*, had no tumefaction, inflammation or specks in the Throat.

The time of Eruption is very uncertain; in a very few it preceeds the soreness of the Throat, in a few it goes *pari passu* with the affection of the *Fauces;* but generally it is (not much) later than the first complaints of the Throat, in a young Woman it was later by 14 days.

In ruddy complexions the efflorescence is very descernable; it is not so distinctly perceivable in Brunets, Indians, and Negroes; unless the miliary Eruption have a considerable *Relievo* as in some, they generally scale and peel notwithstanding. Sometimes it appears only in the cheeks, sometimes only a few clusters in the extremities. Sometimes the *suffusion* was scarce miliary and vanished insensibly by becoming gradually paler without scaling. Where the Miliary Eruptions were considerable, the extremities peel in scraps or strips like *Exuviæ;* in one or two the nails of the fingers and toes did cast off. The period or continuance of Eruption is sometimes prolonged by weakness of nature, by undue evacuations, or by the Patients being exposed to the cold.

4. In some who were very slightly affected, their Illness was of a much shorter continuance, than is described in the Standard kind. *Most of those who died of the Physician died by immoderate evacuations.* As to the deaths, only a few were occasioned immediately by any distemperature of the Throat; they were generally the effect of the Fever, either by an immediate *Necrosis* at first seizure, or by the ordinary fatality of Fevers, or by consequential ails. In *Boston* at a medium of the last eight healthy years (1723. 1724. 1725. 1726. 1727. 1728. 1732. and 1733) in the Months of *October*, *November*, *December*, *January*, *February*, *March*, *April* to 18*th May*, died *pr. an.* 263 Whites and Slaves; this year in the same space of time died 382, is 114 *extra* deaths, and may be reasonably charged to this Illness, it being otherways a healthy time: of these 114, about 71 cases came to my knowledge, whereof in the first period died 35, in the second period 28, and of consequential ails, 8. Of these 71, only about 10 can be said to have died of sore Throats. Of these 71 only 9 were upwards of 14 *æt.* According to the nearest estimate I can make in round numbers, about 1 in 35 have died, that is about 4000 Persons in *Boston* have had this distemper, which is about one 4th part of the Inhabitants.

5. The Summer 1735 was unusually wet and chilly with many Easterly winds, in the Summer & Autumn it prevail'd and was very mortal in several Country Towns. In *Boston* it began in Autumn but did not prevail until Winter, which was not rigid with hard frosts as is usual, but with a very disagreeable chill in the air, especially in the Month of *March* last, in which Month was our greatest Mortality.

6. *Most Malignant distempers affect to throw off their malignancy by some Emunctory.* The despumation of this acrid inqination of the juices in our distemper, that is, its natural *Crisis*, seems to be by the patent and salutary *Emunctories* of the *Fauces* and skin. In corrosive taints, u. g. Venereal and others, a *Mercurial ptyalism* and sudorifick decoction of the *woods*, answer best; this gave us the hint of promoting the tendency of nature in our Illness, by Mercurials, and gentle breathing Sweats a bed; which with good management seldom fail'd, excepting where the *Necrosis* was irremediable from the beginning.

Some affection of the Throat seems to attend most kinds of Eruptive Fevers. In the *Small-Pox* (even where the pustules and other Symptoms were in the smallest degree) they all complain of a soreness of the Throat, but without ulcerating. In the *Measles* there is a hoarsness, and soreness of the Throat. *In ours* besides the soreness, tumefaction; and inflammation in the *Fauces;* there are specks or sloughs of a mellow white or Cream colour, like those on the inside of the cheeks in a Mercurial ptyalism; the Scrophulous and Venereal ulcers in the Throat are yellow; Aphthæ are more of the nature of *phlyctenæ;* many of our Patients complain of a copperish taste or peppery smart in the Throat, as they express it.

7. *As in all other distempers so in this there do sometimes happen violent Symptoms, meerly from the Regimen and Medicines used;* which on that account are not of that bad consequence, as if they had proceeded from the distemper in its natural course u. g. in some constitutions a *Turbith bolus* operates with violence, so as to occasion shiverings, torsions of the Bowels, and Spasms, as if the Patient were moribund: *Calomel* even in very small doses seizeth the Mouth of some to a very considerable degree of inconveniency.

8. *We did not observe any genuine second seizures.* It is true, being Winter Season, many common sore Throats, that is, relaxations of the *Uvula* and inflammations of the Tonsils; have passed with the less observing practitioners, for the genuine Epidemick and were used accordingly; such have afterwards had this Illness, and was erroneously called a second seizure. N. B. Our *Epidemick* is attended with no cough, unless when complicated with a cold or some old habitual *Tussis:* upon recovery, it leaves frequently a small *catarrhous* colliquation or cough, but of short continuance.

In some after being well, upon catching cold, the *Tonsils* have been inflamed even to suppuration; in others the *Uvula* and *Velum Palati* infiltrated and some *phlyctenæ* or common *Aphthæ*, have appeared. Such have also by some been deem'd as second seizures, and used as such.

After a long continuance of cold chilly Weather, there set in suddenly warm Weather hot as mid Summer. *May* 25th, 26th, *&c.* several children, who formerly had this Eruptive fever, have an efflorescence or *miliary* eruption by the heat, as is not unusual with children in hot weather: this was by mistake of some practitioners and others, called a second seizure.

9. *No conditions ƒ Mankind were exempted* (in our Epidemical Autumnal *dysentery A.* 1734. the Negroes escaped) Europeans, West-India Islanders, Indians and Negroes, of all ages, were equally subject to it: but, as in most Epidemical dis-

eases, it affected Children and the younger Persons more generally.

10. *This is a Real History of the distemper as it appeared in Boston New-England*, taken clinically from the life and not copied. There is no stroak or clause, but what I can vouch by real not imaginary cases. It is founded only upon observations or *phœnomina*, that is upon the Symptoms that appeared in the course of this Epidemical disease; it must therefore be of permanent truth.

Account of some Puerperal Cases, which occurred at the Boston Almshouse during the winter of 1823-24. By JOHN WARE, M.D. Physician and Surgeon to the House.

BEFORE relating the cases which form the more immediate subject of this paper, it will be proper to notice the state of health in the Almshouse, before, and during the period in which these cases took place.

In the months of October, November, and the beginning of December 1823, there occurred a considerable number of cases of simple continued fever, the duration of which was generally not less than fourteen days, and the termination favourable, although the course of the disorder was very little, if at all influenced by medical treatment. In some instances, during convalescence, in consequence principally of improper diet, a diarrhœa took place, which in one patient proved fatal at the end of more than three months from the accession of fever, and in several others produced a long and tedious recovery.

During the winter there was among the subjects of the house a remarkable disposition to such bowel complaints as are usually met with at the latter end of summer and the beginning of autumn. From the middle of December to the middle of March they were very generally afflicted with diarrhœa, particularly so during the mild and open weather of the early part of the winter. This affected not merely those in whom it was the only complaint, but extended also to patients suffering under other diseases, particularly those of a chronic nature; and in these it proceeded to such an extent as to merge in itself the symptoms of the primary disease, and become the principal, or in fact, only object of attention.

The evacuations in this disorder consisted principally of undigested food, and thin mucus; though in many cases blood was mixed with these substances in considerable quantities.

There were also some patients, whose complaint might be considered as a true dysentery. It began with discharges of blood and mucus, accompanied by violent griping pains, a quick small pulse, dark and dry tongue, thirst, &c. It often terminated fatally. Cases of the latter kind were confined principally to children, and for the most part to those of a feeble and depraved habit of body. In these the disease from the first produced great prostration of strength and coldness of the extremities, and commonly ended fatally in three or four days; or when it did not terminate thus, passed into a diarrhœa which continued for several weeks or months.

It was difficult to assign any satisfactory causes for this state of things. Complaints of such a nature, are always in some degree prevalent in the Institution, particularly among new subjects, and are to be attributed, in part at least, to the peculiar diet of the house operating upon digestive organs, whose powers have been impaired by irregular habits of life. Many alterations in the diet of the subjects were made with a view to this very difficulty, and the diet of the sick in particular was entirely new modelled, but without much effect. The house in general, was as clean and well ventilated as usual, and as well as in such an establishment could be expected; the subjects being almost universally of that class and character, who can only be made clean and comfortable against their will, and who constantly relapse into a state of indolence and filth when left to themselves. It is worthy of remark, that during this period one of the superintendents of the house was twice seized with diarrhœa, and was sick from one of the attacks nearly a month,—although she slept in a distant part of the house and partook of a diet entirely different from the subjects.

I have introduced this account in order to show what was the general state of health when the cases occurred of which it is my object to give a more particular description.

The room in which women are confined, called the Nursery, contains, not only puerperal patients, but women nursing children, and young children, destitute of parents, who are under the charge of the attendant upon this room. It contained during the greater part of the winter five or six beds, and from eight to twelve occupants, exclusive of infants at the breast, of which there were three or four, the greater part of the time. The room is about 25 feet long, 20 wide and 8 or 10 high, having an open fire place and a sheet iron stove; in each of which there was frequently a fire. It has two windows, both looking to the north-east, and two doors, one of which was closed for the winter.

The Puerperal women in the Almshouse when they are young and healthy subjects, do commonly very well; although their infants, which are generally illegitimate, from the neglect and carelessness of their mothers combined with the confined air of the place, are seldom healthy. All those delivered between May and November 1823, recovered as rapidly as usual. On the 26th of November, Catharine Hunter aged about 18 was delivered, and during several days was recovering so rapidly that it became unnecessary to pay her daily attention. On the 3d of December, I was requested to see her, and found her labouring under severe and alarming symptoms. There was considerable and constant pain in the region of the uterus, which was increased by pressure. The whole abdomen was very sore, but not tense. The lochia had ceased, but the milk continued to flow. There had been frequent chills, but I found the skin universally hot and covered with a profuse perspiration, which gave a slimy feeling to the flesh. The tongue had a thin tough white coat. She complained of constant nausea, and some retching which brought up nothing but the liquids she drank. The bowels were affected with diarrhœa. The pulse were very small and rapid, never less than 120 in a minute, and often more. The respirations were short, hurried and imperfect, with sighing and oppression at the precordia. She had severe headache, with great and general restlessness and want of sleep. The thirst was excessive and uncontrollable.

An emetic of tartarized antimony and ipecacuanha, with calomel, was first administered, which operated thoroughly and with considerable temporary relief. This was followed by a blister over the bowels, a cathartic of calomel and jalap, and a few doses of calomel and opium, but the patient then refused all medicine and took nothing afterwards, except liquid to assuage her thirst. I have only therefore to detail the remaining history of her case. After the operation of the medicine and the application of the blister, the flow of lochia returned, and continued, with short intermissions, till death; its colour, however, was dark, and its smell, particularly towards the close of life, offensive. Delirium came on about the 5th or 6th day, slight at first and only during the night; afterwards more violent, and continuing both day and night. In short the appearances during the last eight or ten days, did not differ essentially from those which are observed in the last stages of ordinary fevers. There was the same black tongue; lips, mouth and teeth, coated with black adhesive mucus, the same cadaverous aspect of the countenance, delirium violent for awhile and then sinking away into a low muttering stupid state, and subsultus tendinum, all ending in death on the 17th of December, about fourteen days from the time at which her disease had first become well marked, and twenty two from her delivery.

On dissection, the mucous membrane of the uterus proved to be the principal seat of disease. It was in size about as large as the egg of an ostrich, the parietes very thick, of a spongy vascular texture, and quite soft. The mucous membrane was of a very dark colour, thickened in some parts to a quarter of an inch, soft and easily torn with the finger. Its cavity contained a considerable quantity of a substance which resembled venous blood coagulated, and passing into a state of decomposition. It adhered to the uterus so closely, and resembled the texture of its internal membrane so nearly, that in some places it was difficult to decide exactly where the division between them existed. It obviously supplied the materials for the lochial discharge. The peritoneum was in some parts of the abdomen slightly inflamed. The mucous membrane of the intestines was redder in some parts of its course, particularly in the large intestines, than was natural, but could hardly be considered as affected with inflammation. The bowels contained a considerable quantity of a thin yellow mucus, mixed with a small quantity of fecal matter. No other parts were examined.

Case ii. In the beginning of December, Caroline Hadley, aged 20 was confined.

Case iii. December 6. Eliza Coltman, aged 22.
" iv. " 11. Mary Decosta, 30.
" v. " 27. Charity May, 18.
" vi. January 6, 1824. Mary Moore, 25.

All these subjects were successively affected with very nearly the same symptoms as the first patient, although not all so severely. In several, however, the commencement of the disease threatened to be as alarming and dangerous, but yielded in a few days. I proceed to point out a few circumstances peculiar to the different cases.

In the subject of Case II, an emetic and cathartic produced a suspension of the disease for several days, when it returned, so as to require a repetition of the same remedies with the addition of a blister. But although in this way relieved from immediate danger, she suffered afterwards, for several months, from a depraved state of the digestive organs and a constant diarrhœa. Indeed it was not until the next summer that she could be considered as entirely well. Her milk did not leave her, and she continues to this time, to nurse her child.

In Case III. although the attack was similar to that in the other cases, yet in its progress the disease took an entirely different course. After the first few days the severe symptoms subsided, she became stationary and remained for as many as ten days in a weak, apparently sinking state, with a moist warm skin, a quick feeble pulse, disordered stomach and diarrhœa. During this time her lungs became affected, with pain in the side, constant cough, expectoration of mucus, febrile paroxysms and emaciation, her appetite bad, and the diarrhœa continuing with occasional intermissions. In this state, apparently on the verge of phthisis, she continued without amendment for nearly two months and then slowly recovered under the use of blisters, digitalis and a milk diet. She was not able to leave the Hospital, into which she had been removed, for more than four months after her confinement.

In Case IV. the first symptoms of the attack were comparatively mild and yielded immediately upon the exhibition of remedies. There was afterwards no return of the disease.

In Case V. the disease began with the usual symptoms, and severe in degree, but ceased after a few days. Again they returned, accompanied by a higher degree of soreness, pain and tension of the abdomen; again they yielded in part; but a good deal of tenderness and pain upon pressure, in the abdomen, remained, and continued with diarrhœa, loss of appetite, emaciation and a quick pulse for many months. She was exceedingly obstinate and perverse with regard to the use of remedies; and it was not till after long suffering that she submitted to the repeated application of blisters and a slight mercurial affection, after which she soon got well.

In Case VI, the disease was of longer continuance, but milder in degree than in any other. It continued for more than a fortnight before any considerable abatement took place; and the diarrhœa by which it had been accompanied continued a good while after all other bad symptoms had vanished, after the strength had amended and the appetite had begun to return.

These cases I have put into more immediate connexion on account of the great rapidity with which they succeeded each other. The VII. case occurred at a longer interval, as no woman was confined in the nursery for a considerable time. Caroline Sholtz, was delivered February 8th, and after being as well as usual for 5 or 6 days, was seized with symptoms similar to those which have been related of the other cases. These were suspended by active medicine, and the next day her appetite had so far ben restored that she made a dinner on beefsteaks. She was consequently taken down the same night more severely than at first. Her symptoms were very nearly similar to those of the first case. She was delirious and afterwards slightly comatose, her tongue and mouth dry and black, her strength much reduced, whilst at the same time she suffered from a constant diarrhœa. At the end of a fortnight, however, she became convalescent, and regained her strength for a short time, rapidly. Imprudence in her diet after a week's amendment, produced a great degree of irritability of the digestive organs. For many days, she rejected every thing taken into her stomach, and was exhausted by a constant diarrhœa. She partially recovered from this state of things, but never entirely regained the appetite and power of digestion which she exhibited on the subsidence of her original complaint. Her situation from this time to her death was very unequal. When she and those around her could be made strictly attentive to a proper diet, she amended; but upon the whole she lost ground. Three days before her death, some of her considerate attendants procured for her a meal of baked pork and beans, of which she partook with a pretty good appetite. In the evening she was seized with violent pains in the bowels, vomiting and diarrhœa, but conscious of her imprudence would not send for assistance till the next day, when she had become much exhausted. I found her with a weak feeble pulse, cadaverous aspect, and cold extremities. From this state she partially revived, but soon relapsed into it and died on the fourth day; six weeks from the birth of her child. No examination was made of her body.

It is proper to observe that a few weeks before her delivery, this subject had been afflicted with dysentery, the vestiges of which remained at that time and probably had some effect in predisposing the digestive organs to the derangement with which they were affected and which finally proved fatal.

Of the treatment of these cases there is little satisfaction in speaking. That which I adopted was in the first place to administer thorough evacuants, and the benefit produced by these was in nearly every case very unquestionable. The discharges from the stomach both of mucus and bile, were copious and discoloured, and the stools of a similar character. The headache, soreness of the bowels, nausea, and unnaturally moist skin, were generally relieved. I next blistered the bowels and gave calomel, with opium in sufficient quantities to restrain the diarrhœa, which was in every case a prominent and most formidable symptom. Where the mouth became affected, as it did in the VI. and VII. cases, I was induced to think favourably of its effects. Laxative medicines were also occasionally prescribed after the first evacuations, and could a proper attention to diet have been enforced, I believe their effect would have been beneficial. Bleeding I did not employ, both because the character of the disease itself did not appear to me to require it, and further because some of the subjects were in such a state of exhaustion from previous diarrhœa as to render it doubtful how they would sustain the operation.

My impression, however, with regard to the medical treatment of these cases is, that in private practice they would all have probably recovered merely by procuring proper evacuations, by blistering, and possibly bleeding at the beginning of the disease; with a careful attention to the bowels, diet and regimen during its course. The crowded state of the room in which these patients were, the want of sufficient ventilation, the disturbance produced by the numbers of people constantly in motion, and more than all the impossibility of convincing persons of this class of the necessity of a strict attention to diet, had evidently a most unfavourable effect upon the welfare of the sick.

The rapidity with which the six first cases of this affection followed each other, and the large numbers which resort to the almshouse at that season of the year, rendered it difficult to make such arrangements as prudence would have suggested, for remedying these evils. During the long interval between the VI. and VII. cases, some measures were taken with this intention. The room was cleared of the children and part of its adult inhabitants. The seventh case occurred notwithstanding and advanced as has been seen. After its termination, the inmates of the nursery were all transferred to another room, and it was thoroughly washed, scoured, white-washed, dried and ventilated before being again inhabited.

In the beginning of April, Eleanor Campbell, in the last stage of pregnancy was attacked with vomiting and purging. She resided at this time in another room but was after a few days, removed to the nursery and delivered of a child which died a few hours after birth. The symptoms which had affected her before delivery, continued afterwards, and reduced her to a state of great weakness. She recovered gradually after a sickness of several weeks, during which the most troublesome symptom was diarrhœa. I could not attribute her recovery to any medical means employed, but rather to the quiet and cleanliness which prevailed around her and to the tractability with which she finally consented to submit to the regimen prescribed for her. This was the last case of puerperal sickness which occured, and this I could not consider as of the same nature, or proceeding from the same causes with the preceding ones.

In the months of April, May and June, several women were delivered in the Nursery and recovered as rapidly from the effects of parturition as is common.*

During the occurrence of these cases in the Nursery, two persons were delivered in other parts of the house, one of whom had been a good deal affected by diarrhœa previous to her confinement, yet neither of them suffered afterwards anything beyond the usual concomitants of the puerperal state.

Two questions of some interest are suggested by the consideration of these cases. 1. What was the nature of the disease, and 2. Was it propagated by contagion. With regard to the first I should answer, that I believed the disease to be puerperal fever, modified by the circumstances under which it existed, and accompanied by some symptoms which it does not generally exhibit. With regard to the second, I feel great diffidence in expressing an opinion. It is well known to be the opinion of some who have attended lying-in establishments, that when one case of puerperal fever occurs it is generally followed by others, and that its propagation is dependent upon contagion. Whether the facts which I have related afford any additional proof in favour of this doctrine, not being able to determine for myself, I leave to the judgment of my readers.

Cases, with Remarks. By Dr JONATHAN SIBLEY.

CASE I.—PUERPERAL CONVULSIONS.

A LARGE healthy woman, twenty-three years old, who had reckoned her full time with her first child, finding herself indisposed in the night, called me very early in the morning. I found her with slight pains, walking about the house, and occasionally seating herself in a chair. In this situation she was attacked with a violent convulsion when I had been with her but a short time. Immediately I took from her arm a pint of blood, and then carried her to bed entirely senseless. After stating to the friends and attendants as well as I could in a few words, the situation of the patient, and endeavouring to fortify their minds against another attack which we had much reason to fear, I then made an examination, and found, to my great consolation, the os uteri *somewhat* dilated.

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* During the months of November and December, of the year 1824, several women have been delivered in the same room, and under circumstances equally unfavourable as the last year; yet no similar cases have occurred.

I sat attentively by my patient, and every pain I endeavoured to dilate the os uteri, and to increase the force of pains by gently irritating the parts with my fingers.

As the pains continued and increased in strength, the os uteri dilated, the child advanced and the woman roused a little from her lethargy ; but a second convulsion, in less than an hour after the first, checked the progress of the labours and disappointed our hopes of a speedy delivery.

The woman had but feeble pains and repeatedly very strong convulsions, two or three hours more, when I felt, very sensibly, the responsibility of my situation, and told the friends and attendants, that 'we should not succeed in this way.'

The os uteri being fully dilated, and the child presenting naturally, I very easily applied the forceps, and in a very short time, with the aid of feeble pains, relieved the sufferer. The child was alive and well, and cried like any other child.

I tarried with this woman several hours after she was delivered of her child, and during this time she had no convulsions, but I was unable to make her know any thing of what had been done.

The night following she had two or three convulsions more, but the effects of all went off in a few days and she had a good *getting up.*

This woman had a second child about two years after the first, and did well. She never had any thing like convulsions, except at her first confinement.

UTERINE HEMORRHAGE.

Case II.—January 3d, 1823. I visited a woman, about thirty years old, of a robust constitution, who had borne six children. She had reckoned her full time of utero-gestation—had been indisposed six hours—lost a large quantity of blood, and had felt but slight pains.

I found her free from hemorrhage and from pains, with a very feeble pulse, and unable to stand, complaining occasionally of numbness in her legs.

Every means in my power was made use of to make her as comfortable as the nature of her situation would admit; light nourishment was frequently given to restore that loss of blood which she had sustained.

I carefully watched, and anxiously waited about four hours, and then with the aid of very feeble pains, I delivered this woman of a full-grown dead child.

The funis was as white as a candle, and entirely destitute of blood. The placenta came easily away, and appeared to lie very low.

When an attempt was made to raise this woman to an erect posture for the purpose of shifting her clothes, she fainted, and was immediately returned again to a horizontal position; her clothes were shifted in that situation, when the woman was carried to her bed, where she complained of numbness in her limbs several times; threw her arms about incessantly; appeared to be extremely faint; complained of pain in her breast, and a few times said, 'What shall I do.' When she had complained in this way nearly an hour, she suddenly turned herself over in the bed and died in a minute.

All the time I was waiting on this woman, very particular attention was paid to hemorrhage, which had been so profuse previous to the time of my arrival. From the time of my arrival to the time the placenta was taken, I could never perceive so much loss of blood as what might be considered an average proportion among women who do well. After she was carried to bed, warm cloths were constantly applied to her and frequently examined, and the woman who waited on her in bed, frequently reported that she did not flow. If any *noticeable* quantity of blood was lost in this case, while I was present, it must have taken place after the placenta was taken away, and before the woman was carried to her bed. When the woman was carried to her bed, I discovered some clots of blood left behind, which made me suspect that some blood might have been lost at this time; but the clothes were so filled with blood from the previous discharge, and the attendants being agitated at the time the woman fainted, nothing certain could be known of the hemorrhage at this time.

What could be the cause of this great loss of blood? No accident had happened to the woman. I presume the placenta must have been separated, in part at least from the uterus, or this fatal hemorrhage could not have taken place. If the placenta was situated near to, or upon the os uteri, I never discovered it in my examination. If this was the case, why did the hemorrhage cease so long before the child was taken? To be sure the placenta came easily away, and appeared to lie very low.

What could have been done to save the life of this woman? I did not think it expedient to turn the child, and take it away when there was no hemorrhage to prevent, and that might or might not happen afterwards; and certainly such an operation could be no remedy for what had already taken place. If any thing could have been done in this way, I think it must have been done several hours before I saw the patient, and while the hemorrhage continued; and even then I think the attempt must have been extremely hazardous.

Case III. A large healthy woman who had borne two pair of twins, and several single children, became pregnant with three children. When she had reckoned a little more than eight months, she was taken in travail and sent for help. When I visited her, she had been delivered of one child without any difficulty.

I tarried with this woman more than twenty-four hours before any other child was born, or before her situation was fully known. We were all satisfied that she would have a second child, and the woman occasionally said that she should have two more; but no one thought that her prediction would prove true.

With the aid of feeble and distressing pains I succeeded in obtaining a second child. When I attempted to take away the placenta with the two umbilical cords, I was defeated in my repeated trials; shortly, however, I found the cause of my disappointment in a third child, which still remained in the uterus.

The abdomen and uterus of this woman had been very much extended by the three children, but after two of them had been born, they were much relaxed and quite flabby, so that the feeble and irregular contractions of the uterus, which continued after the second child was born, had but a slight effect upon the third child which still remained in utero.

The waters of the third child were not yet broken, the feeble and irregular pains had but little effect, and I could see no flattering prospect of a speedy delivery. But these difficulties did not detain me long. Blood soon gushed from the vagina in such a current, that I was sure the woman could bear such a loss but a few minutes.

Alarming dangers attended us, and a death, much more alarming, was soon to be expected! No time could be lost.

I introduced my hand far into the uterus, and seized the child by one foot (the waters being unbroken) turned it, and took it away without any difficulty.

I think I could not have been more than one or two minutes engaged in this operation. As soon as the child was born, the blood ceased to flow, and the placenta (one double and one single) come away in a reasonable time.

This operation of *turning* is the first and only one of the kind that I ever performed to save a woman in the case of uterine hemorrhage, and the ease and expedition with which it was performed depended, I think, in a great measure, on the size of the child, which was very small.

The vital fluid in this case was nearly exhausted, but the woman recovered, and is now the 'nursing mother' of three female children more than six months old.

Union, Jan. 1824.

Medical Report, with references to the state of Health and Disease in Portland, Maine, from Dec. 1823 *to Dec.* 1824. By FRED. BENJ. PAGE, M.D.

[Communicated for the New England Journal of Medicine and Surgery.]

WITHOUT recording the usual monthly details of weather, &c. which would afford but little interest to most of your readers, we shall make some general remarks upon the past season, and then notice those diseases which have presented themselves, and, more especially, been the subject of medical treatment.

The commencement of the year was mild and open. Winter, however, in common language, set in, and terminated earlier than usual, though the spring months were cold, wet and disagreeable. Summer passed without much warm weather; but autumn was mild and generally pleasant. Vegetation was protracted, and suffered materially in the early part of the season, from cold nights and heavy frosts. In the former part of the year, we experienced much rough and severe weather. Snow fell early in December, and drifted in many places to the height of several feet. The severe rain storm, which occurred early in February, and extended along the coast, was severely felt in this part of it, and attended with considerable damage. February 5th was our coldest day. The thermometer stood at 17 below zero. Heavy rains caused the snow to disappear early; and during the month of March, hardly any appeared in this vicinity, though at the north and east it remained somewhat longer. April was mild and pleasant, excepting towards the latter part of the month, when cold easterly winds prevailed, and gave to it the character, which it generally sustains in this climate, *varium et mutabile.* May, also, was cold and unpromising; and up to the first of June, which might emphatically be called the first summer-day, we scarcely experienced a comfortable warm hour, except by the fire-side, which was earnestly sought for, and always found to be agreeable. Towards the middle and last of June, the season improved rapidly, and under the influence of mild and frequent showers, and a good degree of heat, vegetation increased and became quite abundant. The robin appeared early. Swallows were not numerous, and insects, which are usually so troublesome, seemed rather scarce, and less offensive than usual. Some, however, which we do not recollect to have seen before in this climate, made their appearance, while the mocking-bird, a stranger too in this region, paid us an early visit, and charmed us with some of the most beautiful and melodious strains that we have ever heard. In July and August, the mornings and evenings were cold and uncomfortable without an extra garment, though the middle of the day was usually warm. September and October were introduced by long and copious rains, followed by mild and quite pleasant weather.

Early in April *small pox* appeared in town and proved fatal to several who became subjects of its attack. It occurred in a house at the east end of the town, where two families resided, and was introduced there by a seaman direct from New-York. It was reported that he had never had the *vaccine*, and though he previously complained of slight illness, no well-marked symptoms of small-pox could be discovered. The first case which happened was that of a single woman, who had complained several days, and had called medical advice, but the physician not being familiar with the disease, or not suspecting, indeed, that small-pox was the complaint, was not apprized of it till a consultation was held, and the pustules fully formed. She was removed without delay to the hospital and recovered. Partial measures were adopted to secure the rest of the occupants of the house, and those who had resorted there, and had not been previously vaccinated; but owing to several days' exposure to the infection, and the carelessness of one of the women, who would not suffer herself to be vaccinated, and was regardless also of the fate of her children; the application of the vaccine proved ineffectual, except in one of the family, and all became subjects of the disease. The whole number of well-marked cases returned to the hospital, we believe, were thirteen, six of which proved fatal. The disease continued three or four weeks and then disappeared.

Two or three facts worth recording, occurred during the prevalence of this disease. 1. A male attendant at the hospital, who, many years previous, had undergone natural small-pox, was the subject of a local disease, having pustules upon the face, arms, &c. which continued several days, without any the least constitutional affection. 2. A female, who had previously had the vaccine, and was returned to the hospital with a nursing child, ill of the disease, had slight symptoms of small-pox for several days, without any eruption, which terminated in health in the course of two or three days. 3. Many anomalous cases of vaccine occurred during the period of vaccination; such as eruptive diseases, sore arms, abscesses, &c. which could not be attributed to impurities of matter, or the constitution of the patient, but rather to blows, or friction upon the arm, and to the scandalous intermeddling of *friends and neighbours*, in removing matter at an improper period, and disturbing the process of the vaccine vesicle, and preventing its going the regular and healthy course.

Similar facts are related of the disease as it prevailed in other parts of the country, and serve to strengthen our confidence in vaccination, and to confirm our belief that it affords the safest, and only perfect security against the ravages of small-pox. Indeed, it cannot be too often repeated, it is one of the greatest blessings ever imparted to mankind; and in connexion with this subject, Dr Bedingfield remarks, in his late *Compendium of Medical Practice*, that he had rather be Dr Jenner, than any man who has been born during the last thousand years.

How long, we may ask, is this scourge of mankind to remain among us? The time ought long since to have passed, when nothing could be heard of this loathsome disease but its name, and nothing known of it but from books; but the period is far distant, 'unless the legislature will compel all those who delight in the murder of their offspring, and entailing misery upon mankind, to erect the altar of Moloch in a place remote from the habitation of humanity.'

In August several cases of *typhous fever* occurred, in the lower and more filthy parts of the town, and most of those whom it attacked fell victims to its severity. Some cases of malignant fever were also noticed in other parts of the town, the origin and cause of which we shall not at present stop to point out. Most of them were accompanied with severe bilious symptoms, and proved fatal within the week. Some died suddenly in the course of twenty-four hours. The attack was often, though not always sudden, the patient complaining of sharp pain in the head, back and limbs; debility, nausea, &c. distress in the stomach and bowels; the countenance suddenly changed, and the eyes were much suffused; the patient's strength rapidly declined, and he became delirious or comatose, and died either with epistaxis, bilious vomiting or diarrhœa.

Several general causes, applicable to this disease, may be noticed as reasons for the many deaths which occurred, during the short period it prevailed among us. 1. Epidemics, as is well known, are usually most severe at their commencement, and the disease, from a variety of causes, loses much of its force as it continues its progress. 2. The alarm which is created by the sudden appearance of a severe and fatal epidemic, is without doubt, a reason why some, in whom fear acts as an exciting cause, are attacked with the disease; and who, under other circumstances might be exposed to all the force of the infection, and escape unhurt. 3. Physicians are too often embarrassed in the application of remedies, and know not how far they may be administered with safety and advantage. Their practice at the beginning of a new disease, instead of being bold, prompt and efficacious, is generally, as the French say, *expectante;* or more in the style of *routiniers*, who administer well-known remedies, about whose efficacy and operation there can be no dispute, but in such a wary, heedless manner, that in highly acute and inflammatory diseases, they produce little or no effect. 4. This disease occurred chiefly among the poor and intemperate, who could not at all times command medical assistance, or the necessaries of life, and whose constitution had already been impaired both by poverty and disease.

Autumn has been uncommonly healthy, and excepting occasionally cases of *hooping cough* or *cynanche tonsillaris*, we may indeed say, that the complaints of the season have been like angels visits, 'short and far between.'

Frequent cases of severe and alarming *haemoptysis* occurred in the course of the year, some of which terminated favourably, while others ended in *phthisis pulmonalis*, and proved that when the seal of consumption is firmly set upon the patient, the best that can be done is to palliate his sufferings, and conduct him to the grave.

A case of *periodical haemoptysis* recently came to our notice, in which a female patient discharges from the lungs, two or three times annually, from half, to a pint or more of blood, attended by severe cough and debility, which soon yields to gentle remedies, and the patient recovers her health and strength. It is accompanied with some peculiarities of constitution, habits of body, &c. which may entitle the case hereafter to more particular consideration.

Of *consumption*, a disease which is annually increasing among us, and *intemperance*, that pestilence which walketh in darkness, and wasteth at noon day, we have, at present, but one remark to make, that though both often occur with those who are naturally predisposed to the disease, we are convinced they are more frequently induced by carelessness, imprudence and exposure; and that both the one and the other, are more within the control of the patient than is commonly supposed. The latter, indeed, is the more general, and ought to excite most alarm, since it is daily giving rise to *apoplexy*, and other diseases, more terrible, if possible, than consumption, and more speedily fatal.

So far, however, as a single case will test the efficacy of Baron Cramer's remedy for *intemperance*, we have succeeded beyond the most sanguine expectations, and shall be induced to recommend it to every individual, who manifests the smallest inclination to refrain from inebriating liquors, and to be radically cured of a disease, which is annually hurrying thousands headlong to the grave.

A young man applied to me to be relieved of *drunkenness*, and seemed willing to adopt any measures which held up to him the smallest prospect of a radical cure. He said he was in the habit of drinking from a pint to a pint and a half of ardent spirits daily. I believed him; for the *lumen purpureum juventae* had forsaken his countenance, which had become bloated; his constitution was enfeebled; his limbs weakened; his appetite gone, and his health was rapidly declining under the operation of this slow but fatal poison. I gave him directions how to proceed, and urged him strongly to refrain from the use of all kinds of ardent liquors, while he should make trial of the proposed remedy. He acquiesced, and I believe, kept his promise; for after using the medicine a few days, he said he not only loathed all spirits, of which he was formerly so fond, but that he could not even think of them without disgust. The case is an interesting one; and the prospect of having conquered his dreadful habits of intemperance, and of making him a useful servant in future, is a subject of congratulation, and worthy the consideration of all others in 'like cases offending.' If, indeed, a simple preparation of bitters and mineral acids will so speedily operate in checking habits of intemperance, the name of Cramer deserves to be associated with that of Jenner. The operation of his discovery will not be less extensive or beneficial to humanity, since drunkenness is filling our alms-houses and hospitals, and is the predisposing cause of more deaths, than all the diseases in the tables of nosology.

We shall now close our observations with a few remarks upon several *medicines*, most of which have recently been introduced into practice, and first of *colchicum autumnale*, or meadow saffron. We esteem this a medicine of some value, though it too often fails of answering the extravagant expectation, which many have entertained in regard to it. We have repeatedly experienced its utility in both acute and chronic rheumatism, and in gout. Other practitioners speak of its efficacy in pleurisy, peripneumony, diabetes, tænia, &c. but our own experience will not warrant its recommendation in any of the last named affections. It is generally best to administer it with some mild aperient.

2. *Hydro-cyanic* or prussic acid, we consider of but little use in any case. Like every other medicine it has its admirers, who have recommended and administered it in every possible variety of disease. We have tried it ourselves in different stages of hooping-cough, phthisis, &c. and have seldom, if ever noticed any remarkably good effects result from its use. On the contrary, it has given rise to severe and obstinate cutaneous affections, and other diseases, and we think is hardly entitled to the reputation which it has acquired by the researches and experiments of Majendie and others. Indeed, this and *iodine* hold at present, we believe, too high a place in the pharmacological lists of practitioners, owing to the eulogies of Granville, Coindet and Majendie; but we are confident they will not be relied upon hereafter, in the treatment of diseases, in preference to other remedies of longer and better established reputation. If prussic acid is entitled to the many praises that have been bestowed upon it, we should hope and expect, that it might prove efficacious in *cynanche trachealis*, and would recommend it for trial in some cases of this alarming and very obstinate and fatal disease. We regard it, however, as a most speedy and fatal poison in improper hands; and the July number of the *Ed. Med. and Surg. Journal*, which contains a review of its virtues, contains also an account of two fatal cases of poison from its effect.

3. *Liquor Potassæ Arseniatis*, or Fowler's mineral solution, continues deservedly to hold an elevated rank among important medicines, and is indeed one of the most useful in the materia medica. Its usefulness in fevers has long been established, and as a remedy in several *cutaneous affections*, *cephalalgia* and *tic douloureux*, its efficacy is surpassed by no medicine with which we are acquainted; not even excepting the highly extolled remedy of *carbonate of iron*.

4. *Sesamum Indicum*, or the Bean Plant, promises to become useful in several complaints, more especially in *cholera infantum* and *dysentery*, as suggested by Dr Smith of Baltimore, to whom we are indebted for a parcel of the seed, which he kindly forwarded us the last season. Although the plant is

exotic, it is quite common in mild latitudes, and may be seen growing in most of the gardens at the south. The expressed oil of the seed is much used and admired in many families, instead of the imported sweet oil. In Georgia and the Carolinas especially, the mucilage of the plant is a common remedy in bowel complaints of children, and is administered, we believe, by almost every nurse, as occasion requires. It is useful also in common inflammation of the eyes, and we have found it a very elegant and effectual remedy in other inflammatory complaints, upon which hereafter, perhaps, we shall have occasion more fully to remark. We apprehend the plant will not always come to maturity in this northern climate. During the last season, however, we were enabled to raise some few plants, which answered a good purpose, and by devoting particular care to their culture in future seasons, we hope to make them reach such a degree of size and goodness, as to answer common expectations in remedial practice.

5. *Cubeba* or Cubebs, is another valuable medicine, and, without relying upon the authority of great names, under which it has lately been introduced into practice, we have had sufficient experience to warrant our urging a more general use of the medicine, in those complaints for which it was first introduced to our notice. With some constitutions indeed, it will either prove disagreeable or inert, while with others, it makes a speedy and obvious impression, and answers all the good intentions that could be wished for, or expected from any other remedy. It should be repeated in large doses during the day, and, as other writers have suggested, if no effect is produced in the course of a week, it should be discontinued, and other remedies adopted for a cure.

Portland, *December*, 1824.

Remarks on the Dislocation of the Head of the Radius forwards.

By Elisha North, M. D.

[Communicated for the New England Journal of Medicine and Surgery.]

THAT Sir Astley Cooper should say, when treating of dislocations of the elbow joint, that he had seen only six examples of the dislocation of the head of the radius forwards, struck my mind with astonishment. Equal surprise was also excited, when he says this luxation appears to be a *difficult one to reduce;* and that in the two first cases of the kind all attempts at reduction were unsuccessful. But this surprise was somewhat lessened, when he immediately afterwards informs us, that the last patient was placed upon a sofa, and the arm was put over the back of it, and extension was made from the hand, without including the ulna; and *that this seems to be the most likely mode of succeeding.*

From this I discovered that Sir Astley was so unfortunate as not to know, with all his great knowledge and experience, how to remedy this evil. See New England Journal of Medicine and Surgery, third series, Vol. II. p. 426. The signs, or marks, which Sir Astley has given, by which this luxation may be known, are good ones, as detailed in the Journal, for I have not yet seen the original work. It might have been proper to have mentioned, that a sudden extension and pronation of the fore-arm, is commonly the cause of this accident. And that this is done by a foreign force, applied when the mind of the patient is not operating upon the muscles of the arm. In the numerous cases which I have seen, much more numerous than those given by Sir Astley Cooper, the luxation has been produced by a sudden jerk, given the arm by another person. And this is the reason why this injury is more commonly found among children. For these, as is well known, are often pulled by one arm, and sometimes carelessly, by those who have the care of them.

I have been induced to re-peruse Memoir 10th, of Dr Caldwell's Translation of Desault on Fractures and Luxations. From this memoir, it appears that even that celebrated French surgeon was more unfortunate than Sir Astley Cooper. For he has not even given the signs, by which it may be known, when the luxation of the radius over the ulna has taken place. And even doubts the accuracy of Duverny and other French surgeons, who report such cases to have happened. He attempts to show, from anatomical considerations, that such an accident, from violence, must be extremely rare, if it ever occurs. It seems also, that when Desault found this kind of luxation in children complicated with a swelling of the joints, he considered it a kind of chronic affection, and that sometimes it could not be reduced by the expedients of art. He has also neglected, or rather avoided, informing us what those expedients of art were. Now, judging from my own experience in similar cases, I believe that if the Doctor had known how to replace the bone in such cases, the swelling would have disappeared, and that too in a short time. I once had a young girl, to whom another surgeon had been called, and who had, as he said, reduced the shoulder joint. But I found, upon examination, the doctor had made a sad mistake. For it was the elbow, and not the shoulder, that had received the injury. The elbow was very much swelled, for the radius had been luxated for several days. There was no difficulty in replacing the bone in this case, and the swelling, of course, disappeared in a few days.

The mode to be taken to reduce this bone is as follows: The upper arm is to be held firm by an assistant. The surgeon takes hold of the fore-arm of the patient near the wrist, with one hand, and with the other he grasps the same arm just below the elbow, moving his fingers upon the head of the radius. He then applies sufficient extension and supination to the fore-arm, and the moment this is done, he with a sudden and quick movement, preventing the arm from pronating, carries the wrist and hand of the patient to the patient's shoulder, at the same time pressing his fingers upon the head of the radius. In this way, I have never failed, during a practice of more than thirty years, of reducing this bone; and that too at the first attempt. I have had children brought to me several miles, who could not use their arms at all; but, upon the bone being replaced, would, in a few minutes, make use of them. I have generally thought it prudent however, to put their arms in a sling, and sometimes to apply a bandage.

New London, Conn. 1824.

Case of Tracheotomy; and Case in which a Stake passed longitudinally through the body. By Dr Peter P. Woodbury.

[Communicated for the New England Journal of Medicine and Surgery.]

Case I.

On Tuesday, March 26, 1822, I was called in great haste to a son of Rufus Merrill, aged two years, who had got something into its throat, and at times appeared near suffocation. When I first saw the child I thought the difficulty in breathing proceeded from something within the œsophagus. The parent stated that it had been playing with chesnuts but a few minutes before it had come out of another room in this situation. I passed a probang into its stomach, which gave immediate relief. For a moment I felt gratified with my success, but it soon puked, and immediately suffocation was again threatened. I introduced the probang two or three times more, and sometimes with relief. I was now confident that the difficulty of breathing was produced from something within the trachea. When I passed the probang into the stomach, I could distinctly feel the end of the instrument pass over something about as large as a chesnut; and this circumstance, with the relief it gave the child, induced me to repeat the operation.

I now gave its parents my opinion both as to the difficulty, and its only remedy. They answered, "do any thing which will give relief." The child at this time was perfectly senseless, and they had laid it on a bed, thinking it would not breath again.

I began the operation at the usual place, by dividing the skin and common integuments down to the trachea, in a longitudinal direction. I then separated the integuments from the trachea on each side of the incision, and opened the trachea transversely. This not giving that facility of examination I wished, I divided the first cartilaginous ring above the incision; on this, the air immediately rushed into the lungs, and frothy mucus came out of the wound. I then introduced a female catheter into the trachea, and passed it out at the mouth, apparently without meeting any foreign substance. I then made examination with my fingers, but could find nothing. I was about to make further search, when the child coughed with considerable agitation, and threw a bean out of its mouth to a considerable distance. The bean appeared perfectly dry, and was a white one of the largest size. It had been in the trachea about two hours. In less than three minutes the child was playing with a watch. Not twenty drops of blood were lost in the operation.

I closed the wound together with strips of adhesive plaster, and dressed it with simple dressings. No uncommon or unhealthy appearance took place, and the wound was perfectly healed and sound, in three weeks.

The reason for my performing this operation in a manner different from that laid down in the books, was, that I had no one to assist me, and if I had happened to have divided an artery or vein, I could not readily have taken it up alone.

CASE II.

On the afternoon of July 24, 1823, I was called to visit Miss E. M. who had been engaged in taking away rye in the sheaf on the beams of a barn. By some misstep she fell the distance of seven or eight feet, and struck directly on the end of a stake, erect, in a cart below; from which situation one man was not able to extricate her. So completely was the girl transfixed with the stake, that it was necessary to break it off at its insertion in the cart body; and it was carried with the girl upon it, some distance from the barn before it was taken from her.

The stake first struck on the tuberosity of the ischium, and passed laterally into the anus, up the rectum about two inches, thence through it on its left side, up the body in an oblique direction, and out of the left breast, about three inches from the nipple. It lacerated the sphincter ani, and fractured three ribs in its passage. A light substance held at the orifice of the upper wound, was, in common respiration, considerably affected; and by coughing, or by a long inspiration and expiration, a light piece of cloth was much shaken. The stake passed through her body twenty-seven inches; it was three inches in circumference at the least end, and five inches at the largest end. It came out of her breast six or seven inches, so that she kept hold of it with both hands while the stake was in her. The stake was made out of a young hemlock, and the bark with the knots were just stripped off. It is now in my possession.

This was a healthy girl in the fifteenth year of her age, of a large size, had menstruated one year; and had the appearance of a woman in every respect.

On my arrival I found her on a bed with no covering but her common clothes; her friends thought her dying; I was requested not to do much for her, for fear she would die in more pain. Her pulse were scarcely perceptible, her breathing short and hurried, with a cold sweat on her skin; she had an extremely ghastly countenance; she did not incline to say any thing, but submitted to the examination without any apparent concern or sensation. She made no complaint, and said she had no pain, but was somewhat faint. There was but a trifling hemorrhage from the wounds.

After the application of simple dressing to the wounds, I endeavoured to excite the system, and gave her spt. lavender, with a cup of tea. She soon began to breathe better, her pulse began to be more perceptible, and her skin grew more moist and warm. I now left her for the night, this being about nine o'clock in the evening, with directions that if she should get relief to let me have information, thinking that she could not survive many hours.

July 25th.—Found my patient more at ease, but still making some complaint of pain in the abdomen. She talked freely, said she felt better, and was hungry. Had not had any stool, nor passed any water since the accident. Pulse 98, with some fulness. Took away one pint of blood from the arm, gave her Oleum Ricini, dressed the wounds simply as before, ordered her for food mere water after Indian meal had been boiled in it. At times she had a slight cough, which excited some uneasiness at the time.

July 26th.—The oil had not operated, had no discharge of water, complained of soreness of the abdomen, with some swelling above the pubis, with a distinct line of inflammation in the direction which the stake took. Her cough produced more pain at the time of coughing than it had done before. Pulse 110, with hardness. Took away one pint of blood from the arm, and drew away three pints of urine with the catheter, which gave immediate relief. Dressed the wounds as yesterday, ordered the same food as before. Repeated the Oleum Ricini, and in case it did not operate, ordered half an ounce of Sulphate of Magnesia every two hours till this did.

July 27th.—At this visit I met Doctor M. Spalding in consultation. Found the physic had operated, which gave ease. Pulse 90. Complains of some soreness of the abdomen, drew away one and a half pint of urine, dressed the wounds as before, food the same.

At five o'clock in the afternoon I visited my patient again, found her pulse 100, with some cough, pain in the breast and abdomen. Took away one and a half pint of blood from the arm, and drew away one quart of urine, which gave great relief.

July 28th.—Found my patient better in every respect, could turn herself in bed without any assistance for the first time since the accident. From this time to the completion of her cure, there was no uncommon or unnatural appearance observed. The patient evidently improved daily. I drew off her urine seventeen days in succession, after which it became unnecessary. In her first attempt to walk her body inclined a little to the left, but she soon became erect. Six weeks from the time of the accident the patient was able to attend school fifty rods from home. I bled her during confinement five times; and she subsisted these seventeen days wholly on water in which Indian meal had been boiled. She now enjoys the finest health.

Bedford, N. H. October 27, 1824.

On some of the effects of the Poison of Lead. By A. L. Peirson, M. D.

[Communicated for the New England Journal of Medicine and Surgery.]

Of all the diseases to which artisans, from their peculiar trades, are exposed, none so frequently fall under the observation of physicians of this part of the country, as that class of complaints which arises from the poison of lead. The immediate effects of this poison appear to be, *in all cases*, upon the nervous system. Colic, paralysis, pain of the head, Epilepsy, Apoplexy, Asthma, are the affections which it produces, and, as far as our experience goes, the frequency of their respective occurrence is in the order in which we have enumerated them. The *effect* so certainly follows the *cause*, that scarcely an individual can be found, whose occupation has exposed him for any considerable part of his life, to the contact of the oxide of lead, under a summer temperature, who is not affected with some of these diseases. He will, at least, be found to have frequent attacks of colic, which he is anxious to designate bilious,—or complain of weak wrists, which he will not allow to be *palsied*. Potters, all persons employed in preparing or using paints, even those employed in boiling linseed oil, to which litharge is added in considerable quantity to communicate the drying quality, are liable to be affected with these diseases. It is true, their susceptibility to them varies in a very wide degree, and is, no doubt, proportioned to the excitability of their nerves, and the activity of their absorbents. We have said it is the *nervous system* upon which the first effects appear. The *inflammatory* symptoms which supervene upon colic, are a natural consequence of the peristaltic motion of a part of the bowel being suspended. An accumulation of fecal matters and vitiated secretions takes place, and occasions the phenomena of enteritis. Hence the utility of blood-letting, which is not indicated for the local paralysis. A *peculiar hardness of the pulse*, which is not diminished by bleeding, is also probably owing to an alteration in the coats of the artery, to be attributed to the impression made upon the nervous system. This is, to be sure, an unsatisfactory way of accounting for this very peculiar symptom, of the existence of which, in cases of long standing, any observer may be satisfied.

Painters are more than others, exposed to these diseases, some of which, as colic, are no doubt aggravated by exposure to the oxide of copper, and perhaps of some other metals. The oil of turpentine, which is used in almost all the mixtures of painters, has been thought, and I believe with good reason, to aid the volatilization of the metallic poisons, and favour their absorption. The free use of ardent spirits is peculiarly injurious to this class of artisans; our own experience has given us abundant proofs that it increases their susceptibility to all the affections we have enumerated.

The most important facts to be inculcated in regard to the prevention of these evils, are, First, that it is by absorption, and principally *pulmonary absorption*, that the poison is conveyed to the system. If it were not so, the cleanly artisan would enjoy some degree of exemption, which does not appear to be true. To be sure, eating with unwashed hands, and wearing garments soiled with paint, may contribute a part to the effect of exposure. But if it were only so much of the metallic oxide as was swallowed, or absorbed through the cutaneous pores, which produced the effect, the above mentioned should be principal instead of auxiliary causes. I have heard painters declare they could taste these exhalations in their mouth, and feel them in their eyes.

In the second place it is to be observed, that *caloric* is necessary to volatilize the metallic oxide; and therefore the higher the temperature, the greater the danger. Our rules of prevention to artisans should be founded on the principles we have mentioned, and they should be advised, as much as the nature of their employment will permit, to *keep the surface of the body*, as much as possible, *covered*,—to attend to the *cleaning* of their garments and skin,—to shun a high temperature and close rooms,—in all practicable cases, in their laboratories and elsewhere, to adjust a *current of air*, which shall carry from them the noxious exhalations,—to avoid the habit of drinking spirits, and to preserve the bowels in a soluble state.

The following is the case of a sufferer from the poison of lead.

J. W. painter, aged 37, of tolerably robust frame, became my patient with severe colic, September 15, 1819. The attack was attended with inflammatory symptoms, and with very severe vomiting, and was subdued by copious bleeding, leeches applied over the whole abdominal region, and a mercurial course. The attack was followed by a paralysis of the extensors of the hand and wrists, which continued gradually to diminish, without totally disappearing until another attack of colic took place. He continued his occupation of a house-painter, and was attacked with colic ending in enteritis, and followed by paralysis of the extensors, and sometimes pains in the extremities, every few months, for the next five years. I have frequently cut off the complaint by bleeding ad deliquium; but whenever this was tried he never failed to have a most tedious convalescence. A mercurial course seemed to operate as an antidote to the effects of lead. His last attack, which was brought on by exposure to rain in a La Fayette show, in the Summer of 1824, was unusually obstinate and severe, and left him in a very feeble state, but with symptoms of decided convalescence. His appetite was good, his bowels regular, and his flesh and strength gradually returning. He became at this time impatient and discontented with my attendance, and placed himself under the care of a quack, who sweated him, gave him repeated violent emetics, and freely administered capsicum and other powerful stimulants. At the end of a fortnight, sadly changed, and convinced of his rashness, he besought my advice again. He was now labouring under a most distressing cough, with dyspnœa, and a profuse bloody expectoration; his feet and hands were puffed up with anasarcous swelling, his pulse hard and frequent, his appetite gone, and his stools deficient. He was placed on the dispensary list, under the care of Dr Choate, who, in conjunction with myself, used every probable means of cure in vain, and at the end of a fortnight from the commencement of our attendance he expired. He had no return of colic. The following were the morbid appearances on dissection, 30 hours after death.

THORAX.

Left lung presented an healthy appearance throughout. About 6 ounces of water was effused on this side the thorax. Heart unusually large, but otherwise not diseased. Water of the pericardium not excessive. Right lung connected to the sternum and cartilages of the ribs, by very strong, but apparently recent adhesions. The upper portion of the superior lobe had externally a natural appearance, and crepitated on pressure, but when cut into, a thin frothy bloody mucus freely exuded. The rest of the lung was solid, and gorged with blood. When cut into, a bloody fluid was freely discharged. About the same quantity of water was found on this side the thorax as on the other.

ABDOMEN.

Liver larger than natural, and of rather greater hardness. Spleen was also larger and harder than natural. Stomach presented, externally, remarkable alteration of form, tapering in a funnel-like shape from the left extremity to the pylorus, by which alteration its capacity was diminished to half its natural size. Internally the mucous coat was very much corrugated throughout, and the extremity or edge of the rugæ, of a deep purple colour. There was redness of the whole surface. The small intestines were contracted in many places, but every where pervious. The most remarkable contraction was of the ileum at its junction with the cœcum, where the caliber of the intestine was reduced one half. The colon had also several contracted places.

REMARKS.

When the history of a case of chronic disease can be traced for several years previous to its fatal termination, the appearances which the diseased structures exhibit, are particularly interesting. In the above case, the subject suffered for many years from the effect of the poison of lead, and was at last cut off by a new disease. The stomach exhibited the most remarkable changes. The contraction of this organ was probably owing to the same cause as the contraction of the intestines, but the appearances of acute inflammation on the internal surface, must have been the effect of the severe empirical practice. The engorgment of the right lung, and the water in the thoracic cavities, were probably owing to the same cause. On the whole, it was surprising, that after the repeated occurrence of so many attacks of inflammatory disease, the intestines should have remained so little altered in structure.

Salem, Nov. 26, 1824.

MISCELLANEOUS NOTICES.

On the Use of Assafœtida. By George Parkman, M. D.—October, 1822. On beginning to recover from a catarrhal fever, I had a sensation of stricture in the chest, and provocation to cough, whenever any one entered the room, or noticed me. As soon as I felt them I took powdered assafœtida 4 grs. Soon after swallowing it, the irritability, &c. subsided. To ascertain the power of assafœtida, I gradually enlarged the dose to a teaspoonful. Relief always followed, and no other sensible effect. I have taken several such doses in a day. With the same satisfaction as in my case, I have since used assafœtida in 8 persons, to relieve irresistible propensity to cough. Some of my medical friends, to whom I have related these facts, have since used assafœtida in similar doses, with results like mine. It has proved very efficient in spasmodic asthma.

Case of Hydrocele, successfully treated without an operation, by Dr Jonathan Sherwood, Champion, Jefferson Co. N. Y.—In this case the disease began about two months before the time at which Dr Sherwood was consulted. The tumour was then about five inches in length, and four in diameter at the most depending part, extending upward in the direction of the spermatic cord to the abdominal ring, and of a pyramidal figure. The patient having declined an operation, was put under a course of treatment which had proved successful in a case published by Dr Shaw.* Every Sunday he was directed to take a powder, containing one grain each of tartarised antimony and digitalis and five grains of calomel, every two hours, till brisk purging should be produced; and every day a large table spoonful of a decoction of digitalis three or four times. This treatment was continued nine weeks, when the whole of the water was removed, and the scrotum reduced to its natural size. He has since continued to enjoy good health, and during the progress of the cure was able to attend to his daily labour.

Case of Constipation succeeding to Colic. By Dr Samuel S. Marcy.—The subject of this case was a female, aged 35, who had been subject to occasional attacks of colic, but had otherwise enjoyed good health. Nov. 10, 1822, she had an attack, which, not yielding to the usual remedies, was finally subdued by the administration of enemas of the infusion of tobacco on the 13th and 15th. The first enema was merely followed by the evacuation of flatus; after the second, which brought the system completely under the influence of the tobacco, there was a discharge also of a small portion of indurated feces, and a considerable quantity of mucus. From this time the symptoms of the disease subsided, and the appetite returned, but there remained a constipated state of bowels, and a vomiting every twenty-four or thirty-six hours, of a matter having the appearance and smell of an evacuation per anum, and amounting in quantity from three pints to two quarts. This continued until the 24th of the month, the 14th of the disorder, when, by the advice of a neighbouring nurse, she took a strong decoction of the inside bark of the common elder and peach tree bark. This was followed by copious evacuations from the bowels, and complete recovery. Was this evacuation owing to the peculiar virtues of the articles employed, or would a similar effect have been produced at this time by the Ol. Ricini?

Cape May, *Cold Spring*, *March* 8, 1824.

Physiological Metamorphoses.†—Dr Dieffenback has been *usefully* employed for many years past in experiments on '*the*

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* Philadelphia Medical Museum, Vol. III. p. 185.

† Experiments on the Transplantation of Animal Substances. By Dr Dieffenback, of Berlin.

transplantation of parts of the body from one animal to another.' Before hazarding any speculation on the grand results which may be expected from these experiments, we shall give a short catalogue of the principal transplantations, referring to Graef's Journal for the details. In the first experiment, the feathers of a *black* chicken were transplanted into the neck, back, tail, &c. of a *white* pigeon. In the second, there was retaliation, as the pigeons plumes were made to adorn the chicken. In the *third series of experiments*, the feathers of fowls, pigeons, sparrows, &c. were dibbled (by means of a trochar) into the backs and sides of puppies and rabbits. In the *fourth series*, the bristles of cats and wild rabbits were planted in the skins of pigeons. In the *fifth experiment*, a bunch of feathers was cut from the back of a pigeon, within an inch of the skin—a needle was then pushed down through each stump till the bird showed symptoms of displeasure—the bristles of a kitten were then introduced into the stumps—took root there, and flourished luxuriously. *Sixthly.* The bristles of a cat and a dog were successfully engrafted on the back of a rabbit. *Seventhly.* The hairs of a friend's eyebrows were transplanted to, and took root in, Dr Dieffenback's arm. *Eighth Experiment.* A claw from a Pigeon's toe was transferred to his tail. It did not stay there, but it deposited an egg—at least a very fine *new* claw sprouted out from the same place. Sometime afterwards the feather which had been plucked out to make room for the claw, grew again, and a furious contest took place between the indigenous and exotic plants—victory at length deciding in favour of the former. *Ninth Experiment.* A pigeon's head was scalped, leaving the pericranium on. A flap from the inner side of a pig's thigh, was fitted to the wound, and secured by sutures. It made an excellent scalp, and was soon crowned with a fine grove of bristles. *Tenth Experiment.* The nose of a wild rabbit was cut off, and then sewed on again, where it grew as firm as ever.

London Med. Chirurg. Review.

Treatment of Peripneumony by Tartar-Emetic. (*Arch. Gén. de Méd. Fevr.* 1824, iv. 300.)—The following is an abstract of the most authentic account yet published of the present Italian mode of treating peripneumony by large doses of tartar-emetic. It is taken from the translation of a memoir by Rasori, professor of clinical medicine at Milan, and one of the most strenuous advocates of the system. Rasori considers, that the capability of enduring large doses of tartar-emetic, without the supervention of vomiting, or the other customary signs of its action on the alimentary canal, is peculiar to the diseased state of the system; and, consequently, as soon as the system begins to return to its healthy condition, the peculiarity ceases, and the drug acts in the usual manner, even in the usual small doses. The state of the system, which imparts this peculiarity, he considers a peculiar diathesis. It varies in force, both in different peripneumonies, and at different periods of the same case; and in general it follows the course of the disease, increasing and diminishing as it increases and diminishes, and finally disappearing with it. Hence the dose, in which the remedy must be used, is very various; and, on that account, he always commences with small doses, and goes on increasing them as long as they do not cause nausea. *But the smallest dose with which he ever commences the treatment of a case is twelve grains during the day, and as much during the night;* and if the disease has previously made some progress, he administers a scruple, or half a drachm at once. As the disease goes on increasing, the doses must be augmented. The practitioner, on the other hand, must not always diminish the doses when the disease begins to abate. For the capability of enduring large doses sometimes continues, although the symptoms diminish; and in that case, if the remedy is not kept up to the full extent, the symptoms will be again aggravated. In fact, the doses must be regulated, not by the state of the disease, but by the power the system possesses of resisting them; they should not be diminished till they begin to excite nausea, or other signs of intestinal irritation. Occasionally, he remarks, the diathesis decreases, though some of the severe symptoms, particularly the dyspnœa and affections of the mind go on increasing. In such cases he uniformly found that in the lungs, organic changes were going on, which were the immediate forerunners of death. The salutary effects of tartar-emetic are not owing to its emptying the stomach, or acting as a diaphoretic, or giving a *salutary succussion* to the viscera of the chest and abdomen. It is owing to a true counter-stimulant action, (like that of digitalis), which may produce its effect in subduing the *diathesis of stimulus*, without causing any sensible evacuation. It is a remedy much more appropriate than digitalis, which, besides being too irregular in its action, is also too dangerous in its effects, when carried farther than the inflammatory diathesis enables the system to endure it. Rasori has seen the tartar-emetic produce rapid diminution of the pulse, like digitalis; but he never observed a reduction under 50. In many cases the treatment of peripneumony may be entrusted to the tartar-emetic alone. But frequently also it is requisite to conjoin general blood-letting; for the disease may have advanced so far, or may be advancing so rapidly, as to threaten the pulmonary tissue with speedy destruction; and then it would be dangerous to wait so long as is generally required for the action of the remedy to be fairly established. Other reasons of convenience likewise render bloodletting frequently advisable where it is not absolutely necessary. At the commencement of the paper, the author remonstrates with much earnestness against the unwillingness of his countrymen and others to believe the statements which had previously gone forth into the world regarding his singular practice. 'My novel and daring mode of administering tartar-emetic,' says he, 'so astonishes the physicians, who, for the first time, witness it in my Clinique, that they question the proper preparation of the medicine, or the punctuality of the patients in taking it. Some have removed their doubts by procuring a part of it, and subjecting it to chemical analysis, or administering it to their own patients, or taking it themselves; and others have become convinced by seeing my patients take it, or actually administering it with their own hands, and then waiting in vain for the usual emetic effects.' The translator of the memoir bears witness to these facts, having himself been at one time in the ranks of the incredulous; and having become satisfied of Rasori's statements, by analyzing the drug used by him, and administering it to other patients.—*Edin. Journal.*

Injection of Tartar-Emetic into the Veins—Dr Meplain of Doujon, was the hardy experimenter on this occasion. The subject was a young woman who had suffered from her infancy from worms, but in other respects was healthy. For several days previously to the report, she had had irregular and voracious appetite, and yet disgust at the sight or smell of food. Her nights were disturbed by frightful dreams, and she had frequent inclination to vomit. After a fatiguing journey she was seized in the evening with fever, intense headache, eructations, wandering pains in the limbs, cramps in the legs, delirium, grinding of the teeth. Next day, hysterical symptoms, convulsions, jactitations. In the second night, loss of consciousness, rigidity of the limbs. When Dr M. arrived, he found the patient completely immobile—eyelids raised—eyes fixed—pupils contracted—head bent backwards—jaws locked—limbs tetanically rigid—pulse scarcely perceptible—skin cold—abdomen soft—urine white.

Dr M. attributed these symptoms to the presence of worms in the stomach, or their attempts to ascend the œsophagus. He therefore endeavoured, by various means, to dislodge them by vomiting, without success. He next determined on the injection of an emetic into the veins. By means of a hydrocele syringe, he threw into the median vein six ounces of whey, holding in solution four grains of tartar-emetic. The patient exhibited no sign of sensibility during the injection. In about twenty minutes, the eyes and lower lip began to move, and soon afterwards vomiting came on, and brought away eight lumbrici rolled up in a ball, all living. There was now a striking amendment of the patient's condition. The rigidity of the limbs ceased—the pulse became stronger. She again vomited, threw off two lumbrici of a larger size, after which she began to articulate, and soon recovered, having vomited a third time, and brought away several more lumbrici, and much bile.

London Med. Chir. Review.

Fatal Effects from the abuse of Iodine.—M. Zinck has lately communicated two cases of fatal effects from the incautious use of iodine internally; and a third in which unpleasant symptoms were induced, but they yielded to a proper treatment. In one case there were besides diarrhœa, priapism, tremors of the whole body, but especially of the arms; violent palpitations, and other nervous symptoms. The body was not opened. In the second fatal case, the symptoms are not detailed, but dissection exhibited violent gastro-enteritis and other traces of inflammation. These cases strongly confirm the remarks of Dr Gairdner respecting the caution necessary in the exhibition of this medicine internally.—*Lond. Med. Repository.*

Rare Case of Complicated Labour.—Mr Allan has related a curious case of complicated labour, from locking of the heads of twins. The woman was thirty years of age, and this was her third labour, in which she had been eight hours when Mr Allen was summoned. The presenting limb was the left knee, and with it the vertex. He attempted to push up the knee, but without success. The child's ham was then hooked with the fore finger, when the knee was pulled down, and the child's head was felt to ascend. The body was delivered, but the evolution of the head was prevented in consequence of the hollow of the sacrum being occupied by the head of another child, whose body was still above the brim of the pelvis. The face of the second child was turned towards the sacrum, and its occiput closely applied to the throat of the first child. The back of the neck of the latter, was closely applied to the symphysis pubis of the mother, and its face to the back of the neck of the child whose body remained within the uterus. Under these awkward circumstances, it was found impossible to push up the head next the sacrum, without carrying the other before it—and every attempt to extract that which was next to the pubes had the effect of pressing the other so forcibly downwards, as to threaten a rupture of the perineum. Mr Allan was a little embarrassed, but soon made up his mind as to what he should do. Before he could put his intention into execution, however, a violent parturient effort expelled both heads at the same time. Both children were dead. The mother had a smart attack of hysteritis, requiring the abstraction of seventy-six ounces of blood, and other means for its reduction.

The mode of proceeding which Mr Allan intended to pursue, had nature not expelled the twins, was to detach the body extruded, from the head within; and then push up the latter out of the way, delivering the child whose head presented by the forceps. The detached head must afterwards have been delivered by the forceps, or in whatever way the operator found most convenient. As an addition to this plan, we would suggest that, before pushing up the detached head, a piece of garter or tape should be passed through the lower jaw, or, in some manner, be secured to the trunkless head, in order to extract it afterwards, and thus save the second introduction of the forceps, or other instrument.—*London Med. Chir. Review.*

Pharmaceutical Agents.—The impropriety of using any but the proper officinal names for pharmaceutical preparations, will be illustrated by the following ludicrous mistake. Dr Vavaseur, in translating Mr Cæsar Hawkins' paper on Syphilitic Ulcers of the Larynx, into the ARCHIVES GENERALES, comes to a part where Mr Hawkins details a most dangerous and formidable case saved by large quantities of the '*Lisbon diet drink.*' This is a puzzler to Dr Vavaseur—and after racking his brains, he translates it—'*shin of beef soup*,' adding the following learned note at the bottom of the page.—

'Ce qu'on nomme en Anglais *diet drink*, est une *decoction très legere de viande de bœuf;* mais j'ignore quelle est la modification particuliere dont il s'agit, indiquée par le mot *Lisbon.*'

This treatment of syphilitic ulcers, in England, by '*shin-of-beef-soup*' will now take the tour of Europe at least, and excite no small merriment and surprise among the wits of the continental profession, who will never dream that Mr Hawkins meant the compound decoction of sarsaparilla.

London Med. Chir. Review.

Of Madeira, its Visiters, its Climate, and its Diseases.—Dr Heineker of Funchal, Maderia, has published some observations upon these important subjects, and we regret extremely that the playful puerile way in which he has discussed them, induced us to look with an eye of severity upon his observations, which certainly contain many useful, and we doubt not well founded opinions upon the climate of Madeira, and more particularly upon the transference of patients, labouring under phthisis, or threatened with its attacks, from our own shores to that place. The careless apathy with which patients are frequently condemned to transportation, to separation from their friends, and to considerable expense, in a state of suffering which no change of climate can remedy, has frequently excited our regret, and we should be infinitely indebted to any man for a *serious* statement of the particular species and stages of pulmonic disease, which are likely to be relieved by the residence at Madeira. The subject is too grave to admit of trifling, and we wish Dr Heineker had clothed his observations in a more sedate and serious garb. He very truly, however, states, that physicians too often advise, and pulmonics undertake, a voyage to Madeira, under erroneous impressions, and unfavourable circumstances; he concludes,

That a person with the *slightest inclination* towards consumption, cannot seek a change of climate too early.

That a residence of a few winter months will avail but little.

That years, or at all events, winters, are necessary towards recovery or security.

That climate, unassisted by care and prudence, will be insufficient.

That a suppression of symptoms, for a time, is not to be trusted to—' *lateat scintilla.*'

That *incipient* is a frequent misnomer for *confirmed.*

That those in the more advanced stages of disease, are not to expect a *cure*, but only a *palliative*, and that, too, under the strictest precautions, and as long only as they breathe a bland and temperate air.

So many books have been published upon the climate, &c. of Madeira, that it is not necessary to refer to the very scanty remarks of Dr H. upon this part of the subject.

London Med. Chir. Review.

REVIEW.

Art. I.—*Mémoire pour accompagner le Tableau des Observations Météorologiques faites à Washington, depuis le Avril* 17, 1823, *jusqu'au* 18 *Avril*, 1824. Par Jules de Wallenstein, Membre Correspondant de l'Académie d' Histoire de Madrid. Read 7th May, 1824.

THIS memoir forms a part of the contents of the second volume of the new series of the Transactions of the American Philosophical Society. We have read this memoir with much pleasure. It contains the results of great industry, and of great learning in the application of the means for making accurate observations, and of generalizing them by the most approved scientific calculations. The distinguished foreigner who has communicated this memoir to the Society, was admirably fitted by previous study to perform this labour. He had been a long time a patient and voluntary student at the Observatory of St Petersburgh, and his long service in the diplomatic corps of Russia, had furnished him with excellent opportunities for visiting the Observatories of Europe. Of these national institutions, there are on that continent between eighty and ninety, and the days and the nights of some of the most learned men in the world, are devoted in them to the observation of the most interesting physical phenomena which the universe presents.

The national patronage extended to the sciences in this country, if any such there be, has done nothing for the important objects pursued at Observatories. We have, in short, no national observatory, and in the total want of one, we must trust entirely to accident for the investigation of facts, in which all enlightened, and many semi-barbarous nations feel, and have for ages felt, a deep and common interest.

The observations of Mr Wallenstein interest us from their connexions with climate; and although climate at first sight seems the least permanent relation of places, and the least regulated by fixed laws, there are, nevertheless, circumstances affecting its character, which are more or less permanent, and which may be ascertained; or, at least, we may learn something of the circumstances under which changes take place, and make useful inferences from our knowledge.

Mr Wallenstein begins his memoir with an account of the instruments used in his observations. This is a useful part of the paper. It not only gives us confidence in the accuracy of his statements, but valuable information to those who are interested in similar inquiries, and are desirous to obtain the best instruments. The barometer is that of M. Fortin. This skilful artist has enriched the Royal observatory of Paris with an excellent circle, and was before known for the extreme exactness of his balances, and other instruments which require equal skill and delicacy in their construction. Saussure's hygrometer. This instrument is 2·5 decimetres long, and the arc is divided in 100°. The extreme point of dryness is reduced by calculation to zero of the scale. Mr W. has a centigrade thermometer of Fortin suspended at the side of this instrument. He keeps them in a small case which preserves them from dust; and covers their two opposite sides with a gauze sufficiently fine to have them in perfect contact with the atmosphere.

For his purely thermometric observations Mr W. used two thermometers graduated on the tubes themselves. One of these is M. Lerebour's, an artist belonging to the Bureau des Longitudes of Paris, the other M. Fortin's; and a thermometer of Mr Troughton's, with the centigrade scale, and Fahrenheit's.

'The most of my instruments,' observes Mr Wallenstein, 'being divided according to the metrical scale, I have reduced each observation to the English measure, to render it more easy to compare my observations with those which have been made in other parts of this country.'

We make the following translation of some passages taken by Mr Wallenstein from a work of M. de Humboldt, entitled Experiences sur l'Irritation des Fibres musculaires et Nerveuses. This work, originally in German, is partly translated into French. The portions extracted are some of M. de Humboldt's remarks on atmospheric variations in their relation to physiology and pathology. 'If,' says M. de H. 'there exists certainly *the same difference* between the barometric pressure of two places; if, for example, in one of these places, it was 28 inches, and in another 24, organized bodies would probably be affected by the unequal density of the air, according to the laws of habitual irritation. The rise and fall of the barometer *in the same place*, have a different effect. I have no doubt but that countries in which the variations of the barometer are the least considerable, are also the least healthful.' Peru, Chili, and mountainous regions are cited in support of this opinion. 'I am disposed to believe,' he says in another place, 'that the nature, or the composition of the atmosphere, is less variable under the tropics than in the temperate regions of the globe. All meteorological phenomena seem there to follow the same law, with scarce any variation. The diurnal flux and reflux of heat, of light, of electricity, and of the magnetic fluid, are there the most equal in their march, at least so far as the few observations hitherto made allow us to judge. Even the barometer, the variations of which, so complicated in our climates, embarrass the naturalist so much, rises and falls regularly, under the tropics, four times in the twenty-four hours. Shall we attribute to this regularity in the constitution of the atmosphere, the obstinate character of epidemic diseases in the climate of palms? In this climate, as soon as a disease attacks the vital functions, it makes progress without being arrested by any external cause. The changes of the surrounding fluids are not sufficiently great to check decomposition. It is only in change of season, that the power of external exciting causes (pathogeniques) triumphs over the morbid development which exists in the fibre. In temperate climates on the contrary, variations in the principal constituents of the atmosphere, are so frequent, that they act powerfully on the vital functions. A change in the elasticity of the air, in the electric charge, in the quantity of oxygen and of moisture, modify the vital functions, and the progress of epidemics is checked by this perpetual modification of the external elements, or the disease shortly takes another form. Observing physicians have remarked, that, in the temperate zone, places where the temperature is most variable, are the least exposed to epidemic disease.' M. de Humboldt states in this work the observations of Dr Mosely, and Dr Balfour, relative to the horary oscillations of the barometer under the tropics. His personal observations made eight years after, do not accord with those of these celebrated physicians.

According to M. Ramond, the most suitable hour for barometrical observations is noon, 'because the equilibrium of the atmosphere, altered by the morning winds, is ordinarily restored towards the middle of the day. Mr Wallenstein has from the —— of April, chosen this hour for observing the atmospheric pressure. It was not so easy to determine the other hours. The 27th June, he began to make four meteorological observations a day, viz. at 7, 9, noon, and 4 o'clock. It appears from these observations that the barometer is at its *maximum* in Washington, towards nine in the morning, and that it descends till 4 o'clock. His observations on the electric charge, on the winds and their influence, and the moisture of the air, differ so much from those of M. Volney, that he withholds them for the present, or until he has confirmed his own results, by the observations he is now making.

It is not our purpose to analyze the remaining very interesting contents of this memoir. Our design in noticing it was to call to the attention of our readers a subject which is of professional concern, and especially to offer a tribute of respect and gratitude to the learned author, who has thus voluntarily bestowed some of the leisure hours from his diplomatic engagements, to the observation and generalizing very interesting facts in the physical history of our country.

Art. II.—*Mississippi and Louisiana Medical Fee Table.*

WE received through the post-office a few days since, a printed circular of the physicians of Mississippi and Louisiana comprising some regulations for collecting their professional demands, and a fee bill which settles what these shall be. It has been long our purpose to offer our readers some views respecting this whole subject, which we have for some time entertained. No direct opportunity has heretofore occurred, and we have had no particular wish to make one. The doings of our Western brethren, the result of which is a common fee bill for *two states* of the union, offer the best occasion to us for noticing this subject, and we hope we may plead a successful pardon for the few pages we may devote to it, though they shall be found to contain not a line of either *theory* or *practice.*

The union of two states in such an object is not common amongst us. It is rare to find two neighbouring cities or villages even, uniting in a similar object. This however is no objection to the present instance, and we have no doubt the uniformity thus established by mutual agreement will result in advantages to those thus united.

The principal design in forming a fee table is to produce as extensively as possible an uniformity of charges among men living near each other—in the same city for instance. There is great convenience in this. A standard exists to which may be referred all questions of doubt which may arise between parties concerned; and in the last resort, where individuals are not disposed to settle their own differences, it is very convenient to possess such a standard for public reference. A public fee table will probably always represent pretty fairly the value of professional attendance. It is ordinarily, we may say always, the work of the best informed members of the profession, and will be nicely graduated to the circumstances of the times, and of the place for the common advantage of which it is designed. Unless it is made in as strict conformity as possible with these, it will be so far unjust, and may come to be oppressive. This consideration has led us to doubt the propriety of making a fee table for a whole state, and especially for two states, however nearly they may border on each other. It will be unnecessary to allude even to the intricate, and at the present time, highly interesting subject of political economy, to show that the means of wealth in neighbouring districts, differ not only in kinds, but also in degrees; and that the same source of public or individual wealth, will lead to different results, though the two or more situations in which it exists, may border on each other. There is a difference in the circumstances of men in different situations, however difficult it may be in some cases to account for it; and this difference is to be regarded in the formation of an instrument so extensive in its operation as a fee table. A whole profession, scattered widely over a state, and the whole community of that state, or states, as in the present instance, are to feel and exert this, and what is to be thus widely operative demands no small wisdom or care in its formation.

In this case however, as in the mass of similar ones, where the widest advantage is the principal object, the individuals immediately concerned, must after all be the best judges; and if they have made a great mistake, there is something constantly in operation which will correct it. We mean the actual circumstances of the communities in which they live. The ultimate object of a fee table was never to enforce payment. Its sole object through its whole history, has been to produce uniformity, and as nearly as possible, to adapt professional charges to the present state of communities and times. It has one other object. The law no where settles the precise value of professional opinion or advice. A fee table settles this, and equally lessens the chances of embarrassment or imposition.

We have said the ultimate object. We willingly anticipate the sarcasm with which this assertion may be met, in the recollection of all that it has raised. We know that the statutes of this commonwealth,—and the same is true of others,—have protected the physician, by giving him a legal claim to a compensation for his services. It first established a system of professional education, both long and expensive, and having thus done what it could for the public benefit, it sought next to render the profession honourable, by securing to it a proper emolument. The legislature in these acts, have shown a high respect for the judgment and honour of professional men. It has secured the emolument without prescribing what that shall be. A fee table belongs to such a system of mutual protection, as a matter of consequence. It makes the public the witness as well as the judge both of motives and results, and in such a system an attempt at oppression would be as absurd as impracticable.

We have spoken of the advantages that may probably result from the uniform system adopted by our professional brethren in the west. And we did so, in the full belief that the instrument which represents it, will find its modifications in the circumstances of the particular districts in which it is adopted. Some of these advantages appertain to the circumstances which are peculiar to these states. They are new; are extensive; have sure means of subsistence. Men are more equal there as to their possessions. The poor, the natural progeny of the advanced stages of communities, are not the most extensive class. What may safely be required of one individual, or of one district, may be demanded of others. Where compensation for services is left much to the individuals served, and even to the person doing the service, there is a natural tendency to put the compensation too low. It is in the first case a question of benefit received, and the amount of this is rarely ascertained with great accuracy when it comes to be paid for. In the other, where competitors abound, the temptation is stronger to work low, for he who works lowest it is supposed will get the most to do. This is not mere speculation. It is supported by facts which occur near our own selves every day in the year. The fee tables of the new states has settled beforehand what the service is worth; and as it is doubtless the work of the medical men belonging to them, it is liable to no greater abuses, than other institutions which depend on mutual agreement.

There is this great advantage in this system. If prefessional charges are adjusted to the times originally, they will probably continue to be so adjusted in future. If they begin without concert, and without judgment, they will probably continue to do so. This last has been very strikingly the case in our own part of the country. The labour of physicians who live out of the capitals, and not very remote from them either, is proverbially great. They must ride far if their business is considerable in amount, and they must do this at all seasons of the year, and at all hours of the day. A vast sacrifice of time, and of personal comfort is necessarily included in the professional pursuits of the country physician. And for all these the compensation is comparatively nothing. We do not say this without book. We have made inquiries, not only from our respected brethren themselves, but we have inquired of those for whose health, if not lives, these sacrifices have been made, and the inquiry has met one answer, that the toil was vast, and the compensation most trifling. The popular explanation of this is the comparative poverty of the people in the country, and that they are not able to make a more equitable and liberal compensation.

Now we are not disposed to believe in any degree that this is true. There is no deficiency in all the comforts, or of many of the luxuries of life, where this explanation is offered. Ardent spirits, and not the cheapest either, form a part of the daily drink in most families. If a quack medicine gets reputation it is bought, paid for, and swallowed, upon the terms of the favoured patentee. From Stoughton's Elixir to Swaim's Panacea at three dollars a bottle, it is all purchased, and all fairly tried. It is not poverty, or mere want of means that has rendered medical practice in the country little other than an ill requited slavery. The cause is to be looked for and found too, in the original value which was accidentally affixed to the professional service, and which has continued so long to be affixed to it, that now it is regarded as the real, and unchangeable value. We say accidentally affixed. It was truly so. It was the result of no concert, and as frequently grew out of the pecuniary circumstances of the physician himself, as out of those of the people among whom he lived. When these were in any degree easy, he could afford to work low. He did not think or care about the connexion which should always be recognised, for such always subsists between the service and the reward, in other words, about the value and credit of his profession. He made these trifling, and they have continued so.

A fee table contains one regulation which is a very important one, and goes to make up the benefits they secure to the profession and the public. They require a regular settlement of accounts between the parties, and generally prescribe that accounts should be rendered, and if possible, closed, once a year. The good effects of this is universally felt and acknowledged. A man who receives the reward of his services learns something of their value. If he be a prudent man, he will arrive at competence, and a profession which will do this for him, will be cultivated by himself, and be respected by others. His competence is the fruit of great sacrifices and great benefits, and will neither be envied nor contemned. In this portion of the country, with the exception of a very few places, it is in no degree the custom to settle professional accounts at any particular period. The common practice is to let them alone, and suffer them to accumulate indefinitely. When something is wanted by the physician which money might procure, the farmer or the trader, a debtor patient, is asked to supply the occasion *in kind*. This is always done where it is convenient. The article and its value are charged. This goes on, and the cases have occurred in which upon the settlement of a physician's books, in consequence of death or otherwise, he is debtor instead of creditor, with a considerable amount due him on his own books. Now this is not well. It is not well either for the profession or the public. It makes the support of the physician very much a matter of accident, and it diminishes the wider influence which he, as a man of learning and of reputation, should exert about him.

We have now spoken of the advantages of a fee table. Objections however exist to this mode of adjusting professional remuneration. We shall notice two. The first is a vulgar one, at least it is a popular objection. The second is founded in argument, but we think it may be obviated without much difficulty. It is then in the first place objected to the fee table, that it proceeds from a combination of men of the same calling, and is designed to effect a specific purpose, where the very circumstances of the case make it impossible to arrive at a common end. The conditions of men differ, and a fee table cannot be made which shall be common to all, without being either cruel, and highly oppressive. This is the popular objection. It will not detain us long. And now by whom is it made? Not by the poor surely, for professional attendance on them is entirely gratuitous. They pay for nothing. If medical men wanted benevolence, and had a demand for all and every service, the active benevolence of communities would force them into a voluntary sacrifice for the poor. The objection should not come from those between the poor and the rich, for fee tables leave a large discretion to those they are designed to regulate, and this of necessity accommodates the demand to the circumstances of the individual served. If it proceed from the wealthy, we have only to reply that these tables are graduated at the *minimum* that shall be charged on this class of the community, for they are designed to represent an average of demand on the whole community, and what has been so formed can with little reason be objected to by the highest classes.

It has been objected to the fee table, in the second place, that by fixing a charge for specific services, it supposes all the members of the same profession to be equally capable; and that the distinctions of age, talent, and experience, are not only lost sight of, but are supposed not to exist, by an instrument which makes the compensation for the same services the same for a whole profession. By one class it is farther argued, that by this measure, the man of the best mind and widest experience is comparatively poorly recompensed; and by another, that the young and less experienced are kept out of employment, since the older and better may be had upon the same terms with themselves.

To the first part of this objection we have only to reply, that the fee table, (with the College degree, or Society license, let the last proceed whence they may,) supposes the members of a profession equal to all the duties of that profession. It has not concerned itself about the precise degree of that equality, or how much more than is actually necessary one man or many men may possess. In the most important sense they are equal, and a common standard of compensation is hence neither partial nor unreasonable.

In reply to the second clause we observe, that the physician who has made himself eminent, receives a larger emolument than those who want this distinction. He does it either directly by larger charges for his services, or it is done for him indirectly by the wider confidence he enjoys, and the more business he does in consequence. In either way his compensation is greater than that of the mass of his brethren, and is daily increasing with his reputation. As to the unequal operation of the fee table in regard to the younger men in the profession, this is as unfounded as that portion of the objection to which we have shortly replied. They have not much to do, and their compensation is small. This would be equally true if no table existed, but with this additional disadvantage in the latter case, that for what they might do, they would be very poorly compensated. In the other case, they claim the reward of the best skill, for by supposition, and by admission too, they have all necessary skill for their public duties.

We have now offered our readers some remarks on a subject which has always appeared deserving more attention than it has received. We confess we have never been able to trace with much precision the connexion of pecuniary emolument with professional services. This has especially puzzled us in regard to our own calling. To remove present suffering, and to save from apparently threatening death, is an intellectual effort which it seems difficult to value with dollars and cents. And there is an abiding solicitude, a deep responsibility, and a witnessing of misery in the practice of our art, which has not been valued. But the profession must find its means of living to save others, in a compensation for that service. This last must be honourable as well as sufficient, that the profession itself may be honoured. The question recurs, how may this be best effected? We answer, we know of no plan that promises better to effect it, than a properly framed fee table.

ART. III.—*Dissertations on Cynanche Trachealis or Croup, and on the Functions of the Extreme Capillary Vessels in Health and Disease; to which were awarded the Boylston Premiums for the Years* 1820 *and* 1823. By WILLIAM SWEETSER, M.D. Fellow of the Massachusetts Medical Society, Boston. Cummings, Hilliard & Co. 1823. pp. 123.

THE first of these Dissertations contains a very complete and succinct view of the history and treatment of the disease to which it relates. Beginning with a history of the opinions and writings of physicians with regard to it from Hippocrates to the present time, the author speaks successively of its Proximate Cause and Pathology, its Symptoms, its Diagnosis, and its Treatment. Upon all these divisions, his remarks are very clear and judicious, and sufficiently copious. Indeed we doubt whether the physician can readily find within the same compass, a more satisfactory view of the present state of knowledge with regard to Croup. Although of considerable length, this Dissertation is very comprehensive, and contains a great deal of information much compressed, for which the reader would elsewhere have to look over a large surface, and then not find it in a form so much to his purpose as that which Dr S. has given to it.

Upon the Diagnosis of Croup, Dr Sweetser is very particular and full. Although this disease in its most acute form, and in the stage in which it exhibits its most peculiar symptoms, is easily recognized by those who have once observed it, yet it cannot be denied that there are many cases falling under the inspection of the physician, in which, at different stages of their progress, he feels no small degree of uncertainty whether they should be ranked as cases of Croup or not. And although in these cases, it is not generally of any great importance that their exact nature should be determined, in order to the adoption of a satisfactory method of treatment, yet it is desirable as a matter of professional interest, that we should designate as exactly as possible the symptoms by which this disease may be distinguished in all its degrees of violence and in all stages of its progress.

Croup may be confounded with Cynanche laryngea, Cynanche tonsillaris, Cynanche maligna, with the Acute Spasmodic Asthma of children, with Catarrh, and with Pneumonic inflammation. Dr Sweetser treats of the signs upon which the diagnosis between these diseases and Croup is founded, very fully and as satisfactorily as the subject admits. It must be confessed, however, that in spite of all attempts to render it clear, the diagnosis of Croup in doubtful cases is encompassed with as many difficulties as ever, though in severe cases there is perhaps scarce any disease in which it is more easily made.

Dr Sweetser is very decided in his opinion of the inflammatory nature of this affection, and of course equally decided with regard to the general principles upon which the treatment is to be founded. He particularly advocates with great earnestness, early and copious evacuations of blood, as the most certain means in our power of arresting the disease. This remedy doubtless, from the pathology of the disease which seems the most rational, would appear likely to be efficacious. And we have no question that in practice it has proved as much so as any other. Yet its absolute efficiency, or at least its very great superiority to other modes of treatment is yet a matter of doubt. We meet with practitioners of great respectability and extensive experience, who differ entirely on this point. One will assure you that he always bleeds his patients, the other that he never does, and both that they have been wonderfully successful. One attributes his cures to bleeding, another to emetics, another to calomel, and another to seneka tea, and the advocate for each remedy, claims for it a superiority over all the rest. There is no part of the treatment with regard to which physicians appear to be so well united, as the use of emetics, and to these in his remarks upon the method of cure, our author assigns a conspicuous place, believing them to be next in order of importance to bloodletting.

Dr Sweetser at the close of his Dissertation makes some remarks upon the expediency of performing the operation of bronchotomy in croup, and seems to incline to the opinion, that if resorted to earlier in the disease than has usually been done, it might promise more successful results than have hitherto attended it. We quote his remarks upon this subject.

'When the operation is once determined upon, we must be particularly careful not to delay it too long, as the violent efforts made by the child to continue respiration, and the blood in its circulation through the system having but partially received its vital change, will very soon so exhaust the living powers, that, should the respiration be ever so much relieved by it, the effects of the disease could not be recovered from. The early employment of the operation may possibly prevent, in some degree, the extension of the disease, for if the energies of the system are raised by it, the restorative powers will be more successfully exerted. Would it not then be oftener successful, if physicians, instead of considering it a last and almost hopeless resort, had recourse to it earlier in the complaint, before the fatal symptoms manifested themselves?

'Van Swieten insists much on the necessity of performing bronchotomy early in those quinsies which have their seat in the larynx and trachea. Having spoken of some other remedies he proceeds—"but when these remedies have not been used, or else applied when the disease has become too violent, or if they have all been tried without any abatement of the symptoms, nothing remains, but the patient must be either delivered up to certain death, or else a passage must be made by art for the air to enter into the lungs." "But that an incision may be made through the windpipe with hopes of success, it is necessary that the disease be recent or not of long standing, for when it has continued any considerable time, there is reason to fear lest the pulmonary arteries have already been stuffed up by impervious blood;" &c. &c. "The most important point," says Mr Lawrence, speaking of it in cynanche laryngea, "is the time at which the operation ought to be performed, and this should be as soon as the symptoms enable us to determine the nature of the disease. In no case is delay more dangerous; the patient is constantly exposed to the risk of suffocation, which sometimes comes on very suddenly; the difficulty of breathing certainly produces so much constitutional disturbance, and the circulation of venous blood through the brain and other organs, causes so rapid an exhaustion of the vital powers, as are of themselves extremely dangerous."* Many other physicians have strongly urged the necessity of performing bronchotomy early in the disease, before the symptoms evince a fatal close to be at hand. Some have even said that it ought to be the first remedy employed in well marked cases of croup. To do the operation then with any hopes of success, I feel persuaded that it ought to be done early, that is, as soon as our other remedies have been proved to be unavailable.

'Though experience will not warrant me in offering an opinion in relation to the expediency of this remedy in croup, still, from the authorities already adduced, and from many others which might be cited in its favour, I am disposed to consider its employment as not only justifiable, but even proper, where the symptoms do not yield to other remedies, and where there are not evident marks of considerable pulmonary disease. It must not be inferred, however, that much dependence is to be placed on the operation; on the contrary, I conceive the chance of its success to be extremely small, yet there is a chance, because it has succeeded; and allowing it be ever so small, ought it not to be offered to the individual? Especially as the operation is neither very difficult nor hazardous, nor would the child be likely to feel much pain from it, his attention being so wholly engrossed by the extreme suffering from the disease.'—pp. 59–62.

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* Med. Chirurg. Trans. vol. vi.

The second dissertation contains an interesting view of the various relations of the capillary system both in health and disease, and one of this, as treating of a subject of a good deal of importance, and which at the same time has not, till lately, attracted much attention, we shall give a more full account.

In treating of the capillary system, Dr Sweetser includes under this term, all the extreme vessels of every kind.

'At the termination of the arteries there is a network of fine vessels into which all the blood is poured, and from which it passes into the veins. From this network the secretories and exhalants take their rise. It in truth appears to form a reservoir of materials for the supply, not only of the veins, but of those minute vessels which perform the most important functions in the animal frame, functions upon which our wellbeing and the continuance of our existence are in close dependence. It is this reservoir, if we may so call it, which, strictly speaking, is meant by the capillary system; but so intimately are all the extreme vessels connected in their functions, so immediately dependent are they upon each other, that it will be impossible for us to treat separately of this system. The exhalants, including those of nutrition, the secretories, the excretories, and even absorbents, though we by no means intend giving a distinct description of each, may all be considered as extreme capillary vessels.'—p. 65.

This system is universal and pervades every part of the body, even those parts which in their natural state receive no red blood; and the vessels which compose it anastomose generally with each other so as to establish a universal communication. The capillary vessels are distributed to different organs in different proportions, those which have the largest share of labour allotted to them being the most abundantly supplied. The degree of vascularity is in proportion to the energy and activity with which the functions of the part are carried on. Thus the skin, glands, serous membranes, &c. are very full of capillary vessels—the bones, cartilages and ligaments, on the other hand are but sparingly furnished. In the former, the natural actions and the processes necessary to recovery from injury, are rapid and vigorous—in the latter they are languid and comparatively feeble.

The state of the capillary system varies at different periods of life. In the earlier stages of existence when growth is rapid, they are not only relatively but absolutely more numerous than in its more advanced period, when the shrivelling and change of colour of the skin, the whitening and falling off of the hair, and the loss of the firmness and rotundity of youth and middle life, indicate the obliteration of many of the vessels which formerly existed.

Dr Sweetser suggests that the temperaments may be connected with the state of these vessels.

> 'The capillary system is not manifested alike in every individual. May not the different temperaments be intimately connected with its state? Many circumstances would lead to the belief that it is the most fully evolved and active in the sanguine, as their external appearance, their greater liability, other things being equal, to those diseases in which this system seems in a special manner to be concerned; also the rapidity with which diseased or restorative actions, generally speaking, go on in them. Our habits of life too affect the state of this system. Those engaged in pursuits which require much physical exertion, probably have it more perfectly and equably developed than the sedentary and inactive, for it is a law of our economy that parts should become vascular, in a degree, certainly, in proportion to the action required of them.'—p. 71.

Beside the general system, there are in the body two other sets of capillary vessels entirely distinct from it—the pulmonary and the hepatic. In these systems there is a great uniformity in the structure and distribution of the vessels, and nothing like that variety which we find in different parts of the general system. In the pulmonary system, the change from black to red blood is effected—in the hepatic the secretion of bile takes place, but whether any further purpose is answered, remains a matter of doubt.

> 'Of the structure of the capillary vessels we know but little. They were thought by Boerhaave to possess only a mucous coat. Hunter believed them to be almost entirely muscular. Ruysh demonstrated that these vessels exhibited a variety in their arrangement and texture according to the different organs they supplied. The circumstance that ossification never occurs in this system induced Bichat to believe that the common membrane of the arteries does not extend to these vessels, but that it changes gradually to a different texture. We can know nothing with certainty of the structure of these vessels. They probably partake of the nature of the organs they supply; hence the variety of diseased actions

which have their seat in the capillaries of the different organs, it has been thought, may be owing to the peculiar modifications of the vital properties of these vessels arising out of their difference of structure.'—p. 76.

The capillary system, according to our author, performs by far the most important part in the circulation. It is essentially concerned in the performance of all the functions. The larger vessels are only necessary indirectly and secondarily. In some animals, as the zoophytes, life is dependent solely on a capillary system; there are no large vessels; the same is true of vegetables. Yet their life is perfect, their functions adequately performed. The heart and large vessels are only of importance as subservient to the capillary system. They bring to it its materials, they take away its refuse, but they can do nothing farther.

Even where large vessels exist, as in man, the circulation in the capillaries appears to be taken in great measure out of their power. The motion of the fluids in them is not propagated from the heart through the arteries, for it sometimes continues after the action of that organ has ceased; and besides their mode of circulation and their quantity of blood is varied in a manner not consistent with the supposition, that they are dependent upon the heart for their motive power. Their circulation is carried on according to Dr S. by a property, to which with Bichat, he gives the name of insensible organic contractility. That they possess some peculiar powers by which their functions are performed cannot well be doubted, although with regard to the propriety of this appellation, there might be considerable difference of opinion.

The capillaries are the agents of the function of nutrition, and are intimately connected with the development of animal heat. They are frequently also powerfully affected by the passions, and upon this subject Dr S. has the following remarks,

'I conceive the effect of the passions to be generally diffused throughout organic life, not exhibited uniformly and exclusively in one particular organ or set of organs; and also that the shades and degrees of influence are various and much modified in the different parts of this life. The apparent effect, however, must be more manifest in some organs than in others. The same comparative influence, for example, exerted on the system of capillaries as on the internal organs, would be much less evident in the former, because their functions are more generally diffused; we cannot refer a derangement here to any definite point, as in organs which have distinct functions and location.

'If then the opinion be correct, that the influence of the passions is generally diffused throughout organic life, the system of capillaries would come in for a large share of this influence, which seems actually to be the case. I suspect that the functions of the capillary vessels are as frequently affected by our mental feelings as the great functions of the heart, liver, &c., though for the reasons just stated, the effect here is not so obvious to our senses.

'I do not, for my own part, think that the effects exhibited in the capillary vessels, during the operation of the different passions, are to be so generally referred to sympathy as Bichat seems to believe. In sudden fits of anger, the blood will often enter and leave the capillaries of the face almost instantaneously, and without any perceptible alteration in the great circulation. The same thing happens in shame. Under the influence of this passion, the face, and even neck and ears, will become momentarily suffused with blood, and without our being able to refer any peculiar, any primary sensation to those organs which perform the great functions of life. In fear, the blood will at times very suddenly desert the cutaneous vessels, and often profuse sweating ensues. This passion, to be sure, frequently induces a sense of internal oppression, and fluttering about the heart; but may we not in part refer these effects to an accumulation of blood in the internal organs, as a consequence of its desertion of the surface? It is well known, that the effect of an accumulation of blood about the heart is to excite palpitation. No doubt, too, but there may, in many instances, be a direct diminution in the heart's power. In anger, we feel, especially, a sense of oppression when the surface is pale. Now in such cases why may not the state of the capillaries be directly influenced as well as that of the internal organs? Have we any more reason to say, that the extreme vessels sympathize with these, than that these sympathize with the extreme vessels? The tears flow in grief, excessive joy, &c., but there does not seem to me to be sufficient proof that this secretion is always the effect of sympathy. These passions, for any thing we know to the contrary, may exert a direct action on the vitality of the lachrymal gland; as well, in fact, as on that of the liver, which Bichat seems to admit.'—pp. 93–95.

The functions of the capillaries are greatly affected in disease. It is in fact in them that the original processes of disease reside. In order to health it is necessary that there should be a certain degree of fulness in these vessels, and that those appertaining to different parts of the body should bear, in this respect, a certain relation to each other. Whatever destroys the balance which ought to exist between different parts of the same system of capillaries, or between the different systems, produces derangement. Disorder often consists in this very irregularity of distribution. Unnatural fulness or unnatural emptiness may either of them produce symptoms of derangement, by itself, and may still farther operate in the production of disease by giving rise to congestion in the large vessels.

Between simple fulness or congestion of the capillaries and actual inflammation, it is not easy to draw the line. The two states run into each other, and although the extreme cases may be readily known, yet there will be intermediate grades not so easily distinguished.

'An inflamed part receives more blood than it does when in a healthy state, it being admitted into vessels which before conveyed only white fluids. The vessels probably become dilated, and perhaps, after a while new ones are formed. Hunter supposes the blood vessels to be endowed with a power of active dilatation, which for some inscrutable purpose they exert in inflammation; the obvious effect of which is to admit more blood than they do in their ordinary state. Parry thinks that a proneness in the vessels of a part to dilatation, may give it a disposition to inflammation, and also that it may bear some relation to various other maladies.

'That a part, in a state of inflammation, should receive more than its ordinary supply of blood, is in conformity with the general law of our constitution, that the more labour an organ has to perform, the greater must be its supply of this fluid. When any new process is set up in any portion of the system, more blood is sent to it. This is witnessed in many healthy processes; as in lactation, between which and inflammation there is a striking similarity. Before milk is secreted the vessels are dilated, and the gland becomes full and harder than usual; there is also an increase in its sensibility and irritability, and pain is often felt in it. After secretion has taken place these appearances partially subside. They are most manifest during the first lactation. Now in inflammation there is some new and unusual purpose to be effected, which demands extraordinary efforts from the capillary vessels that are to conduce to it, and their supply of blood must be proportioned to the sum of these efforts. Thus slight inflammation may be carried on in an organ by its own powers, the system not being called upon for aid; but if it is severe, or the energies of the part feeble, the necessary purposes cannot be thus accomplished. Then the actions of the large vessels nearest the inflamed part become increased; and when necessary, this increase extends, by what Hunter calls continued sympathy, even to the heart itself. It would seem here as if the part made its first demand for assistance upon its nearest neighbours, and so on, when requisite, to those most remote. We may on this principle, then, in part explain sympathetic fever; but this may also arise from irritability, or that state of the system which disposes it readily to take on excessive and irregular actions, which it can neither limit nor control. Whether such actions have any final cause, that is, whether they are necessary to effect some salutary purpose in the economy, or are strictly morbid, we do not know; analogy would seem rather to lead to the belief that their end is salutary.'—pp. 109, 110.

In all the stages and phenomena of inflammation, the capillaries are ultimately concerned. In the processes of adhesion, of suppuration, of granulation, these are the agents by which the changes taking place, are brought about. The specific inflammations also, and the different character which inflammation assumes in visiting different textures, are to be attributed to a difference or modification of the powers, &c. of the capillary vessels, in different persons and different parts. Of the connexion of the capillary vessels with fever, Dr S. remarks,

'The capillary vessels are certainly much affected in fever; in fact the greater proportion of its phenomena are manifested in them. The function of nutrition becomes almost entirely checked; the absorbents grow less active, the secretions and excretions are, for the most part, diminished in quantity and altered in quality. The urine is passed in small proportions, and deposits no sediment on standing. The mouth becomes dry, and a peculiar matter is thrown out, coating the tongue. The gastric and intestinal fluids are usually diminished in quantity, and perhaps have morbid qualities. It happens, however, in some fevers that particular secretions are increased, from which cause diarrhœas and bilious vomitings at times occur.

'The skin in fever is generally dry, pale, and contracted, and its colour is changed to a dirty white. During the exacerbation, however, it becomes flushed, either generally or partially. Sometimes it is preternaturally hot, at others cold; or it may be cold in one part and hot in another, showing a difference of action in different portions of its capillary system. The capillary vessels of the eye, and especially of the sclerotica, also contain less blood than in health, hence this organ loses its accustomed brilliancy, and becomes dull and heavy. Fordyce remarks, that if there be an ulcer, or wound, on any part of the body, during the attack of fever, it dries up; showing a change or diminution of action of the capillary vessels, even among the muscles.

'A return of the extreme vessels to their natural actions is among the first phenomena of a healthy crisis of fever. The skin grows moist, and there is a free circulation through its vessels. The secretions and excretions are also restored to their natural state; in fact, in every perfect crisis, the first appearances are a general restoration of the healthy actions of the capillary system. Those remedies, also, which have the greatest tendency to induce a crisis, are such as have their action particularly directed to the capillary vessels; ipecacuanha and antimony are both of this class. An emetic of either of these substances, given at the commencement of a fever, is more likely to check its course than zinc, copper, or any of those emetic substances, whose operation is more particularly confined to the stomach.—pp. 119, 120.

The dissertation concludes with some very just remarks upon the connexion of the state of the capillary system with the derangements of the digestive organs. It is the opinion of the author that derangement more frequently begins in the extreme vessels than we are accustomed to believe. The affections to which they are liable, are generally attributed to sympathy with more important organs. Dr S. believes, that in many cases their functions are first impeded, and that disorder then ensues in parts of more consequence. This remark has a general application, but to take Dyspepsia for an example—

> 'In this complaint the functions of the capillary system are much deranged ; nutrition languishes ; the skin becomes sallow, dry, and cold ; wounds do not heal well ; and all the actions of this system undergo an alteration, sometimes being diminished, at others becoming irregular or morbid. Now this state of the capillaries is usually explained on the principle of sympathy, and correctly no doubt in many instances, but not always ; for dyspepsia, I conceive, may often originate in, and be kept up, certainly for a considerable time, by the condition of the extreme capillary vessels. One of the functions of the capillary system is nutrition. Now suppose this to languish from a torpidity of action here, or not to go on with its usual degree of perfection in consequence of the capillaries acting morbidly, the consequence would be a diminished call on the part of the nutritient vessels for new supplies, on which account the stomach would diminish its efforts ; for a thousand circumstances might be brought to show that the action of this organ is, on a general principle, in the direct ratio of the activity of the immediate instruments of nutrition ; it being a law of the living body, that where there is a series of actions going on to produce one and the same result, there should be a due relation kept up between these actions. The whole chain of digestive phenomena proves this. When the stomach acts powerfully, the liver, pancreas, and mucous glands pour out their fluids profusely ; and the converse of this happens when it languishes in its action. When there is a torpor in the action of the liver, the action of the stomach becomes diminished, and by restoring vigor to the former organ, we also restore it to the latter. If the nutritive vessels are active, the digestion is brisk and perfect, the stomach seeming to put forth just so much power as their degree of vigor demands.'—pp. 121, 122.

These Dissertations are certainly creditable to their author. It is evident that he is accustomed to think carefully and study thoroughly, and to be satisfied with no results which have not been made the subject of deliberate investigation. It is no small additional praise, as times go, that they are written in a plain, simple, and generally perspicuous manner ; their author appears modest and unassuming, and makes no efforts at rounded periods, balanced sentences, or ambitious ornaments, all of which appear to us totally out of place when connected with scientific subjects.

Art. IV.—*The Seats and Causes of Diseases, Investigated by Anatomy; containing a great variety of Dissections, and accompanied with Remarks.* By John Baptist Morgagni, chief Professor of Anatomy, and President of the University at Padua. *Abridged and Elucidated with copious Notes*, by William Cooke, Member of the Royal College of Surgeons, London, and one of the Secretaries to the Hunterian Society. In two Volumes. Boston: Wells & Lilly:—and H. C. Carey, and I. Lea, Philadelphia. 1824.

THE great work of Morgagni has been ever since its publication the principal store house of facts in Morbid Anatomy. Its value has been universally acknowledged, and writers upon disease have not failed to appropriate abundantly from its ample stores, whatever might serve their purpose in illustration of their own ideas. It has been ably and faithfully, though somewhat awkwardly translated into English, and is therefore accessible to the merely English reader. It is allowedly the only full book of reference which we possess, for the subjects of which it treats; and yet to the majority of the profession it is as if it existed not at all—few can consult, and fewer still possess it. In some public institutions, and in the private libraries of some fortunate individuals it may be met with; but the translation of Dr Alexander has, we believe, never reached a second edition; and although there is always a small number of those entering the profession who are eager and anxious to possess it, yet this number is never at once sufficient to authorise or encourage a new impression.

The reason of this is found in the very great bulkiness of the work, and in its great tediousness. Its occupies no less than two thousand five hundred very portly quarto pages, and would fill at least fifteen or sixteen octavo volumes such as they are in these degenerate days of splendid type and ample margin. To study it is within the compass of no man's leisure, and even to read it, requires a hardihood which it falls to the lot of few of us to possess. Its pages therefore are reserved for the few who are curious in the minutia of morbid anatomy from the love of the science itself, for those who wish to illustrate, by examples drawn from it, their doctrines in pathology, and for the many, (comparatively speaking) who love to be able to quote it, on account of the air of research which it gives to their writings and conversation. But as for the greater part of the medical world, who have either too much practice or too little patience for such investigations, they derive no other light from this great luminary than comes reflected from those who seek for it at the fountain head. As to its tediousness, it has many of the faults incident to the epistolary form of writing. It is prolix, diffuse, digressive, and wonderfully minute even upon points of very trifling importance—whilst to add to this, the translation, though it has the reputation of being a very faithful one, is nevertheless deficient in freedom and elegance, and is too literally rendered from a foreign language, ever to be considered a good composition in our own.

Mr Cooke has attempted to provide a substitute for this ponderous work by the abridgment before us, and has in this way made a very useful book. He has compressed it into a compass not exceeding one fifth of that of the original, and has thus put it into the power of every man to have upon his own shelves all that is essential to the pursuits of ordinary students in this department. It is true that those who are consulting Morgagni with a view to publication, or to the very thorough examination of a subject, would choose still to go back to the work itself; but there is a large class, a very large class of professional readers, who now very seldom think of, and never refer to Morgagni, that may in future always have by them a book sufficiently exact and copious, accurate and perspicuous, to which they may turn to guide them in their pathological examinations of the living, and assist them in their dissections of the dead.

The views of Mr Cooke in prosecuting his labours are expressed in the following passage from his Preface:

'Although in consequence of Dr Alexander's having followed his author by a literal interpretation, most of the obscurities in the original pervade the translation, yet I have found the latter of essential assistance. Indeed, before I had fully determined upon publishing an abridgment I had condensed the epistles from that translation; but when I afterwards resolved on submitting the work to the public under another form, I went over the ground a second time, carefully examining the original as well as the translation. My epistolary abridgment from Alexander, however, had convinced me that to render the work at all suitable to the present time, considerable freedom should be indulged. I have, therefore, not considered myself bound to give a literal interpretation when it appeared practicable to express the same idea more precisely in fewer words—nor have I always followed Morgagni's order in describing the particulars of individual cases. In exercising this freedom I have incurred more responsibility, and exposed myself to much additional labour, but I trust it will appear that by this means greater perspicuity has been gained, without any sacrifice of faithful description. In the arrangement of the whole I have not studied nosological order, but following Morgagni's general divisions, with the exception of the last chapter, I have divested the work of epistolary desultoriness, and have endeavoured to throw its contents into a natural and available, if not a very methodical series of sections. To all the observations derived from Valsalva's papers I have affixed his name; and, to the remainder the name of Morgagni is attached, though in this number those cases are included which he derived from his friends, or has quoted from medical records. In general, however, if not uniformly, the authority for the cases and observations which are not his own, is distinctly mentioned. I have likewise subjoined to every case and paragraph a reference to the corresponding epistle and article in the orginal work.'—pp. vi, vii.

In abridging the accounts of symptoms and dissections, Mr Cooke has been generally very successful in retaining whatever is really important to the right understanding of the disease, and discarding that which is irrelevant and discursive. For nearly all the purposes for which it is intended, this abridgment will serve as well as the original work. And if it were good for nothing else, it would serve an excellent purpose as a kind of guide—an analytical table of contents, by which we might easily ascertain where the exact information we sought was to be found, and thus save ourselves the tedious and unprofitable labour of hunting over the heavy quarto pages of the entire work.

In addition to the labours of abridgment Mr Cooke has added to the work a very considerable body of notes. His views in this addition he gives in the preface.

'At the commencement of my labours, I did not intend to make any considerable addition by means of notes; but in the progress of transcription for the press, it appeared to me that the value of the publication would be enhanced by indulging greater latitude of annotation than was at first contemplated. But the work had then been announced, and I was somewhat pledged for its early appearance: consequently I could only avail myself of a very hasty selection from my own journal, or from publications to which I had immediate access. Under these circumstances I must bespeak the utmost indulgence with respect to the notes themselves, and their distribution. I felt that the work was not one of theory and hypothesis—not one replete with matters of mere speculation—but a record of valuable facts; and therefore my annotations chiefly consist of what has actually passed under observation, or of opinions deduced from experience and observation, and recognised as good authority. I might have considerably enlarged the number of my own dissections, had I not been restrained by the necessity of limiting the extent of the work, which indeed, now very much exceeds my expectations.'—p. viii.

The notes taken altogether possess a very considerable value; still it may be questioned whether in the abridgment of so large a work it would not have been as well to occupy the same space in making the abridgment as complete as possible. Those at least, which are not calculated to illustrate the immediate object of the work, but merely contain some incidental remark of the author of the abridgment, and of these there are many, might well have been spared. Such notes as the following, although not objectionable on any other account, are so on this. They do not tend to illustrate the subject matter to which they are appended.

Morgagni relates a case in which the patient became so delirious that it was necessary to bind him in bed. Mr Cooke remarks:

> 'It is still not unfrequent to bind, or, at least, to coerce patients, in delirium. I have known cases in which this practice has proved extremely injurious; an opposite plan of treatment, under careful management, is very salutary.—*Ed.*' p. 3.

Morgagni alludes to the species of dropsy arising from water between the cranium and scalp. The following note is annexed:

> 'I have recently attended an interesting little girl about four years old, whose head, two years ago, was greatly enlarged from this species of dropsy, from which she perfectly recovered under the use of purgatives and digitalis.—*Ed.*' p. 17.

Such notes frequently occur; it may seem hypercritical to object to their introduction; but they occupy space which might be better filled. They are well enough in themselves, but they are superfluous and out of place. The very object of this abridgment was to purge away the superfluities of Morgagni, and there seems no reason why any more regard should be shown to those of Mr Cooke.

With this exception we think that Mr Cooke has performed his task in an unobjectionable manner, and provided us with a manual of morbid anatomy which every physician should own and habitually consult. It is some additional recommendation that this edition is well executed, on a good paper, and with a clear and distinct type; circumstances which do not always combine to add to the attractiveness of medical books.

Art. V.—*Pathological Observations. Part I. On Dropsy, Purpura, and the Influenza of the latter end of the year* 1822, *and beginning of that of* 1823; *and particularly on the Morbid Changes of the Blood, and their Influence on the Production and Course of these Diseases. Illustrated by select Cases and Dissections.* By William Stoker, M.D. Edinburgh. Licentiate of the King and Queen's College of Physicians in Ireland, senior Physician to the Fever Hospital and House of Recovery in Cork-Street, &c. &c. &c. Dublin. pp. 244.

THIS is a somewhat curious book. Some of its doctrines are apart from the received ones, and their principal support is derived from the success of the practice which is founded upon them. The leading pathological doctrine of the volume is, that diseases, or many of them, 'depend,' to use the author's language, 'on changes which take place primarily in the fluids, as others do in the solids.' In another place, he speaks of the importance of ascertaining in which diseases primarily commence, the solids or fluids, provided the commencement be common to them both. Farther on he alludes to opinions long entertained by him of 'a diseased state of the blood.' He has ascertained that the kind and colour of the buffy coat of the blood differs in diseases. This he states is remarkably true of the buffy coats exhibited by the blood in diseases of the lungs and liver. There is a perpetual reference to the states of the blood. Thus we have 'morbid appearances of the blood;'* 'morbid condition of the blood;'† 'cohesive tendency of the blood, even whilst it still circulated in the sanguiferous system;'‡ 'morbid cohesiveness of the blood.'§

Similar expressions abound, but it is unnecessary to multiply them here. We should not have collected so many, or noticed the work at all, had we not found in our examination of it that the author, with all his partiality for views which are old enough to be new, and which many circumstances have conspired to strengthen and confirm in his mind, has with these many sound pathological notions, and always avails himself of the more generally received principles of the day, in the treatment he recommends, and in its explanation. We have quoted them farther to show, that the pathology of the author belongs to another age.

A physician who has attended at all to the progress of his profession has not wanted occasions to notice changes. Cabanis has a whole volume on the 'revolutions' in medicine. Physic is the most imaginative of the professions. In the law, the statute books have provided as well as they could for existing cases, and the common law, while it has supplied all that was deficient in the other, is at the same time a permanently accumulating fund for all present emergencies. The literature of theology has a volume on the 'corruptions' of religion, but its earliest sects survive, in all their original freshness, and the latest are merely modifications of the old, or are entirely new. With medicine it is otherwise. The latest doctrine takes the place of its predecessor. The older ones are lost in the reign of the new. The very volumes that contain them are as much out of fashion as themselves, and rest undisturbed in their humble places in the book room.

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* Page 32. † Pp. 33, 34. 72. 117. 135. ‡ P. 36. § P. 106.

We speak of doctrines that have prevailed. Unmixed error in opinion, however, is as rare as unmixed evil in character, and hence what has long been exploded, sometimes comes into vogue again. Sometimes this has been brought about by accident. An ingenious man advances what seems, and is with him, and his age too, new; but it is afterwards found that the same thing has been said by some forgotten writer centuries ago. This has been very strikingly the case in medicine, and it is now no very easy matter to theorise soundly, and at the same time originally. But old theories get into favour again in another way. Many of them are so much involved in the literary history of the art, that they are necessarily known. They are parts of an introductory lecture perhaps, and are frequently heard; or fill up a preface, and are sometimes read. A curious man will have learnt them from their authors. In practice, facts will be observed by him, that will not be readily explained by the latest doctrine. They will at length suggest some other. An association thus slight will gain strength by the recurrence of similar observations, until the new and the received, will at first come to be questioned, then given up, and at last opposed.

The succeeding ages in our profession at least, have rarely been just to those which have gone by. We think there is much to be regretted in this. To the student of the latest period there is in it much to regret. Precious facts, which have been noticed under circumstances the most favourable for observing them, and which have been related with a simplicity and lucidness of detail which our gross and superficial generalizers have never thought it worth their while to attempt to imitate, are now in a measure lost to the student. They have been unceremoniously pushed one side by less important descriptions, or come to him only in the shape of mutilated abstracts. Not to name a host of other worthies, who now reads Bonetus, Lieutaud, Haller, his entire works, or even Morgagni? Nobody. We have not time for the old it is said, for we must be borne along upon the torrent of the new, or be distanced by our own age. We have time only for an octavo Haller, and even Mr Cooke's Morgagni must be dispatched with great haste. You must soon give us a *codex medicinæ* as well as a *codex medicaminum*, or we shall go to school to the empirics in pure self defence.

The growth of medical literature is a forced one, and does not come to maturity. Some of the books which excited the most attention at their first publication remain unfinished. This is especially true of some of the works, and the most promising ones too, of Clutterbuck, Parry, Marshall, Hall, and Ramsbotham. They have given us a first and second part or volume, and that is all. It is not that they or some of them have ceased to write and print books too, that this has happened. No. They have obliged us to buy and read their new books for their reputation's sake, but we look in vain for the completion of what first gave them a name. We complain of this, and we have a right to complain. This is sheer literary forestalling, and the practice is as unprincipled in this market as in any other. But there is other offence in it. It multiplies books, and makes a new demand on the student for an unprofitable labour. We have sinned in this way but little in this country. We have done as little in medical book making, as in any other branch of the trade. It was to our praise when it was asked 'what have American physicians done for their profession,' for of course the question refers to the making of medical books. We have confessedly done but little. We wish we could say as much for England who asked the question. We have republished the books of the last age in English medicine. This Rush did years ago, and the numerous foreign editions of Rush's own writings, and the foreign current praise of the few medical works which have been produced here, answers the question, if it were really worth answering. There is something else in this connexion to complain of. It is the practice now so universal, of publishing new editions of works. By the time an order from this country is executed in England, a new edition is in preparation. It sometimes actually happens, that with the work we get a catalogue announcing a new edition, 'corrected, improved and greatly enlarged.' The reason of all this is not that the first edition is exhausted. The author has got some reputation by his book, and if a small one has sold well, a larger one may sell better. We have had occasion to examine these seconds and thirds, and it is not true in most of the cases, that a reprint with additions within the year, at least, is any better than the original. These works remind us of American editions with *Notes*, the only possible benefit of the last of which has been in the majority of cases, to secure the copy. Suppose the older, the better, and the best writers in medicine had done this; that Hunter instead of Adams, had improved himself; suppose the majority had done so, the world would scarcely contain the books. Those men wrote when their whole minds were full; when they felt that as far as their powers went, they had exhausted their subject. And their great works remain lasting monuments of themselves and their age.

But to come back to Dr Stoker. Dr Stoker has paid much attention to the state of the blood in diseases, particularly in the diseases about which he writes. He has been led to do so because he has observed changes in this fluid which he thinks are more or less peculiar to diseases, and because 'pathologists have, for a long time, considered diseases to consist, either of morbid actions that do not produce any change in the structure of parts, and therefore do not admit of anatomical inquiry after death; or of alterations in the structure which do take place, and become the proper objects of anatomical examination.' We shall state the evidence which is brought forward by the author to support his opinions. We shall do this with most ease and fairness by giving an analysis of his work.

The first inquiry to which the subject leads the author, is 'whether or not the buffed surfaces, of blood drawn in several kinds of diseases [exhibited in a table] were necessarily and essentially connected with slow coagulation.' 'By comparing, he continues, the first horizonal column with the second, the fourth with the fifth, or any of those in which blood is stated to have had, with those which had not such surfaces, it will be found that in the former instances, the time of coagulation was never proportionate, but often inverse to the extent and degree in which that process took place.' Again, 'The explanation for some time given of such appearances on the blood is incompatible with these facts, thus detailed, that slow coagulation was caused by the violent agitation the blood had undergone previously to its being drawn, may perhaps be also questioned. Instead, therefore, of attributing these appearances of the surface merely to the subsiding of the red particles during the slow condensation of the lighter parts, we are, I think, warranted in supposing that an altered and unhealthy state of the blood, exceeding the effects of mere agitation, takes place in the course of the circulation, either from want of due preparation of the fluids at the two chief sources of the supply, and of the subsequent changes these fluids should undergo in their passage through the pulmonary, sanguiferous, and hepatic system, or from the injurious effects of diseased functions in the organs of sanguification.'

We have in this quotation the doctrine of the author. It is expressed with some little hesitation, but as he advances, it is more developed, and more distinctly declared. His opinions are not in correspondence with those of one writer at least, Mr Thackrah; and as Mr T. owes what literary reputation he possesses to a treatise on the blood, which it may be remembered obtained Mr, now Sir Astley Cooper's prize, we cannot but express our regret that his work was not noticed by our author. Mr T.'s views are supported by many well conducted experiments, and have in this fact a claim to notice. Mr Thackrah has the following on the subject. 'On drawing blood during high vascular action, I had repeatedly noticed, that the first cup, which remained fluid the longest time had the strongest size—the surface of the second had transparent spots, and the third, which was soonest concrete, had no such appearance. Hence I was led to infer, that the formation of the buff coat in such diseases depends on the blood's indisposition to coagulate, such tardiness of concretion allowing the particles to subside.'*

There is one point on which these authors agree, and it is an important one, for it has connexion with practice. It is that the buffy coat on the blood does not characterize inflammatory action. 'The practical conclusions which this subject induces,' says Mr Thackrah, 'demand serious attention. The fibrous tunic is admitted to present itself in cases of the greatest vital debility,—cases in which the loss of but a moderate quantity of blood, would hurry the patient to his tomb; while this fancied criterion of acute disease, is often, nay commonly, absent in maladies, where severe inflammation is combined with the greatest constitutional strength. In affections, moreover, which require the repeated abstraction of blood, it has often been remarked, that the buff coat has not appeared on the first or second bleeding, yet on the third or fourth, it has been copiously exhibited. What shall we say, then, of the doctrine of this tunic's characterizing inflammatory action, and warranting the repeated abstraction of blood,—the doctrine, I mean, unlimited, and unguarded?'

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* An Inquiry into the Nature and Properties of the Blood, as existent in Health and Disease. By C. Thackrah, Esq. p. 111.

Dr Stoker has the following to the same purpose:

'I do not wish to be misunderstood as concurring in the opinion that the buffy coat is always indicative of inflammation, an opinion which does not accord with my experience; on the contrary, I have often witnessed much of that sort of appearance on the blood drawn in certain kinds of dropsies, when the patient had neither increased action of the vessels, nor any unusual sensation of pain or heat in any part; but, on the other hand, in certain conditions of the mucous lining of the cavities or of the viscera, when all other characteristics of inflammation were present, no buffy coat appeared on the blood after being drawn.

'I am inclined, from what I have seen in such cases, to think that when inflammation is confined to the mucous membranes, the blood is not generally buffed; and that when it is in a sizy state, that then the texture of the liver or lungs is directly engaged, or affected by sympathy with the parts concerned, so as to influence the condition of the functions in these organs.'—p. 42.

This last paragraph is not very intimately connected with that which immediately precedes it. The object of that being to state an important general doctrine on the state of the blood in inflammatory disease, at least in some of its states. We have followed the author, however, for we might not have found a better place for it.

If the opinions now quoted be correct, something is gained concerning the condition of the blood in disease. It is no sort of consequence how old the doctrine is, or how new. The object of the author is to show that the blood is altered; and not only this, but in consequence of changes, it has an agency, and an important one in the continuance of disease. Nay, farther, he is disposed to think that the changes may in some cases precede, and so produce disease. It was proper for him then to defend himself with what was either best known, or most likely to be admitted.

The next peculiarity of the blood in disease is its colour, or the colours of its buffy coat in different affections. If what is said on this subject be correct to the extent imagined by the author, we have a new and valuable means of diagnosis. We shall let the author speak for himself.

'The colour and external characters which designate various kinds of buffy coat, being also found to indicate the particular functions engaged in producing them, afford additional arguments in favour of the foregoing opinions. In simple pneumonia, for example, as appears from inspection of the table, the coat on the blood is generally of a colourless white; but when tinged, it is with bright red, the depth of the tunic, seldom exceeding a few lines, and to this probably it is owing that the cupping on the surface of such blood is generally remarkable; the thin and tenacious film contracting as it forms, and drawing towards the centre the external margin at the circumference of the less contractile crassamentum.

'In simple forms of hepatic disease, on the contrary, the buffy covering is generally darker through its whole substance than in pneumonia, and is externally yellow. It occupies a large proportion of the solid part of the blood, and is not often cupped; when it is cupped there is reason to suppose that the lungs are partly engaged.

'In diabetic complaints, which there is so much reason to believe originate in imperfect digestion, or insufficient preparation of chyle, it is well known that when blood is drawn it is often found covered over with a whitish milky-like fluid.'—pp. 39, 40.

In the following paragraph the author says that he found from conversing with Mr Todd Professor in Anatomy and Surgery in the Dublin College of Surgeons, that he, Mr T. has long observed the same thing, and that he could, 'on inspecting the cups of blood taken in different diseases, be able frequently to pronounce what organs were primarily or chiefly engaged in those who were bled; that with the white and cupped surface having indicated the lungs to be the seat of disease, and that with the dark yellow colour and equal surface, the liver.'

We recollect distinctly a case of gout in which during a paroxysm, the blood exhibited a milky or cream-like appearance on the surface. This occurred in the case of a distinguished Professor in a distant state. He had observed it in his own case frequently. In some one or more of the recent foreign journals it has been mentioned that a free oil has been observed on the surface of the blood in some instances.

Immediately following the observations on the blood, are cases of *dynamic dropsy.* We shall give a condensed account of one of them.

Case II. S. C. aged 24, not married. Sept. 28th. Ill five days; was exposed to cold and damp. Symptoms. Pain in right side, extending from hypochondrium across chest, cough, hoarseness, dyspnœa; these rapidly followed by general anasarca. 'At present dropsical effusion is so great, that on the side of the face most dependant large watery tumours appear.' Ascites. Amenorrhœa, six months. Pulse 100, *hard;* costive; urine scanty; much thirst; tongue white and loaded; skin dry.

V. S. ad ʒx. Rhei gr. xij. S. mur. hyd. gr. iij. M. Haust. Oleosum. Mistur. expectorant. ℥xij.

3 P.M. Blood highly buffed and yellow. Pain in the chest and dyspnœa relieved soon after V. S. 7 P.M. relief continues. Free dejections.

Sept. 29th. Ascites much diminished. Tongue, pulse, skin,

&c. better. Still some pain in the right side and back. V. S. ad ℥viij. Pulv. antim. gr. ij. every five hours. Omit other medicines, except mist. expectorans.

Sept. 30th. 8 A.M. better. 11 A.M. dyspnœa and cough less; pain of side and back impedes respiration in some degree however. Other symptoms as before. Ten leeches to seat of pain. Rub abdomen with camphorated oil, thrice a day. Tight flannel swathe to abdomen round the waist. Continue other medicines. One P. M. Leeches bled well; pain not entirely gone.

Oct. 1st. Much better. Dropsy almost gone; urine two quarts. Pain in side continues. Appetite keen. Pil. hydrarg. gr. iij. et haust. oleos. Blister to side. Continue other medicines.

Oct. 2. Urine coagulates by heat; on evaporation leaves a substance of adipocerous colour and consistence. Ascites not wholly gone, other things as well. Convalescence went on gradually, and she was dismissed (cured) Oct. 18th.

In commenting on this case, Dr S. particularly notices the continuance of the ascites after a fair trial of V. S. and the other means which were calculated to remove it sooner. The truth was according to him, the case was about passing into the next variety, the adynamic. This, however, was prevented by discontinuing the more active depleting remedies, and by a resort to those which have a different effect.

Adynamic dropsy,—dropsy with debility.

Case I. April 6th. M. R. 32. Dysentery and ascites. Skin dry, pale olive colour; pain in right side, dyspnœa. Pulse 110 hard; tongue brown; no appetite; sleep bad; weak. Dropsy of three months standing; has suffered from poverty, cold and nakedness. Amenorrhœa five years. V. S. ℥viij. Ol. Ricin. and tinct. op.; tinct. digital. Belly to be rubbed with ol. camph.; wine ℥iv. 7th. Relieved by V. S. ℥viij. were drawn in three minutes, solid in 15. Coagulation not yet firm, though 24 hours from V. S. No buff; surface bluish and very serous. Ascites and dysentery diminished. Continue remedies, except V. S.; wine ℥iv. 8th. Ascites still less; acute pain in region of heart. Pulse 100, hard; 5 stools. V. S. ad ℥viij. Blister to right hypochondrium. Pulv. Dover. gr. vij. every 6th hour. Wine ℥iv. 9th. relief from V. S. ℥ix drawn. Coagulation slow; round patches of yellow frothy buff. No return of pain since V. S. Ascites still less; urine three quarts, four stools, less tenesmus; pulse 100, soft but firm. Dov. pulv. gr. viij. three times a day, tinct. digital.; 9th. gtt. xij twice daily. Wine ℥vj. 10th. Ascites somewhat greater; urine three pints; jaundiced. Pulse 100, full; stools 4, natural; blister very painful. Pil. hydrarg. gr. xxij. opii. gr. iij. fol. digital. gr. v. Gelat. sapon. q. s. f. m. divide in pil. granar. quinque, sumat. unam 8 va. q. q. hora. Repeat friction: wine ℥vj. 12th. In all respects better. 18th. Not as well; dysenteric symptoms. No ascites R. ol. ricin. et tinct. opii. 14th. Nausea; no ascites. Emetic and laxative. She got on well with little interruption till 24th, when she went into the convalescent ward. 28th. Return of old symptoms. V. S. ʒix. Pills of hyd. and fol. digital. and pulv. antim. Ol. ricin. with tinct. opii. 29th. Better. May 10th. Dismissed (cured.)

Dr S. in commenting on this case, speaks of the change in colour the blood underwent during the treatment, from livid to natural, and ascribes it to the treatment; showing 'how mercury, aided perhaps by the other remedies in use, seemed to act either directly on the diseased mass of blood itself, or by altering the condition of the organs concerned in producing that diseased state.' If Dr S. means by 'organs' the small vessels, he will find many to agree with him. In truth it does not seem very easy to understand how the mass of blood is changed during disease in any other way. But this by and by. He farther directs attention to the combination of stimulating cordial treatment with directly depleting measures in this case. The beneficial effects of this union in this and other cases which are given, are in proof of the judiciousness of the practice, and recommend it to farther trial.

Purpura.—Dr S. includes with Bateman under this term, 'every variety of petechial eruption, and of spontaneous ecchymosis; not only the chronic form of it, which is unaccompanied by fever, and which has received various denominations, (such as hæmorrhæa petechialis, petechiæ sine febre, land scurvy, &c.) but also that which accompanies typhoid and other malignant fevers.'

We extract the third case of this disease.

> 'Catherine Rourke, æt. 36, was admitted into the Fever Hospital, Cork-street, on the 30th of April. Her nose, part of her cheeks, and upper and lower extremities were of a purple colour, diffused unequally, the stains being deeper in some parts than in others.
>
> '*May* 1*st*. This patient's illness commenced on the 14th of April, with rigors, headach, and vomiting, which she attributes to fatigue, depressed spirits, and exposure to cold. Her fever has continued ever since. Has used much purgative medicines, and James's powder, in the course of it. The catamenia appeared on the 25th of April, several days before the usual period, and still continue. This discharge had been always previously regular. On the 26th

of April the purpura appeared on the parts which they now occupy, and the eruption was accompanied by increased restlessness, uneasiness at head, slight delirium and anxiety; has had no sleep since. The purpura is much less on the lower extremities than at the time of admission, but unchanged on the face and upper extremities. Is much distressed with nausea and frequent vomiting of grass-green fluid. Tongue deep-yellow and loaded, but soft; pulse 100, and feeble; feels excessive soreness on very slight pressure over either hypochondria or epigastrium, and the tendency to vomiting is farther excited by it. One stool since admission; urine free; thirst urgent; skin moist.

'Prescribed.—Let the head be immediately shaved, washed with camphorated spirit of wine, and covered with flannel. Let her have five grains of blue pill every sixth hour, and an enema in the evening. A blister over the right hypochondrium; mint infusion, to settle the stomach, to be frequently given. L. Wine 4 oz.

'*May 2d.* Slept well through the night, and feels much better to-day; the purpura has entirely disappeared, leaving but a few dark and large petechiæ on the backs of the hands, and over the feet; thirst urgent; tongue cleaning and soft; three stools with tenesmus; the vomiting is much relieved; but still throws up a little of the same green bitter fluid; the blister has risen well; urine free; pulse 70; the soreness at the epigastrium and hypochondria entirely removed.

'Prescribed.—Let the mercurial pills, infusion of mint and enema be repeated. M. Wine 4 oz.

'*May 3d.* Purpura almost totally disappeared. The petechiæ contracting in extent, and the colour becoming more faint. She continues to recover; no vomiting; one stool. Continue the remedies.

'*May 4th.* Feels better in every respect, except sharp pain in the joint of left shoulder. Purpura has totally disappeared.

'Let a blister be applied to the pained part.—Repeat the remedies. M. B. Wine 3 oz.

'*May 5th.* Blister has risen well, the pain relieved, and is better in every respect. Eyes and face slightly jaundiced.

'Repeat the mercurial pill, infusion of mint and enema. M. B. Wine 2 oz.

'*May 7th.* Prescribed.—Let the mercurial pills be discontinued, as they have caused some excitement of the circulation; 6 drachms of sulphate of magnesia immediately, and half a drachm of Peruvian bark three times a day. M. B.

May 14th. This patient has been doing well since last report, except that she has at times felt rheumatic pains, on account of which, and the tendency to intermittents which then, and for some months prevailed, Peruvian bark in powder has been daily administered, the bowels being kept free by purgative medicines.

'*May 18th.* Was attacked at midnight with rigors, headach, restlessness and thirst, which still continue. Skin hot and dry; complains of extreme oppression; tongue loaded and yellow; face flushed; nausea frequent; bowels costive; urine pale; pulse 120.

'Prescribed.—Venesection to 10 ounces; a pill of 4 grains of calomel, with an oil draught and an enema in the evening.

'*May 19th.* Felt immediate relief by the bleeding. The blood is slightly buffed; the surface yellow and frothy; the rest of the coagulum solid and of natural colour; five bilious stools; tongue furred and yellow; pulse 80; slept well, and feels neither oppression or sickness; says that she was much in the habit of being bled from the arm, especially in the spring of the year, and that it always gave her relief.

'Prescribed.—Repeat the fomentation of the feet, and the enema, if necessary; omit the other remedies. M. B.

'*May 20th.* Is rather more feverish to-day, and feels more oppression of spirits than she did yesterday; pulse 100; bitter taste of mouth, and has more pain of right side over the hypochondrium.

'Prescribed.—Five grains of blue pill twice a day, and right hypochondrium to be rubbed well with camphorated oil.

'*May 21st.* The fever is now apparently symptomatic of the state of the biliary organs, which have been disturbed by the friends of the patient secretly giving her food improper for her. As the sequel is no longer interesting to the subject of the work, the connection between the state of the hepatic system and the other symptoms being established, it will be needless to detail it further. In the two succeeding days the fever declined, but the jaundice of the surface increased, accompanied, on two nights, with a severe return of green vomiting.' pp. 119—123.

SECTION II. *Of the cure of Dropsy and Purpura. Blood-letting, general and local.*—The prejudice has gone by which prohibited bleeding in dropsy. Dropsy is a functional disease, if we may be allowed the expression. It is a disease of vessels performing a natural function, but only doing so in an excessive or morbid degree. Even where the accumulation of a fluid in a cavity takes place from what seems a mechanical cause entirely, a tumour, or enlarged organ, preventing the usual return of fluid into the circulation, it is highly probable that even here, the diseased processes which produce and keep up tumour or other organic changes are communicated or shared by other parts, the small-vessels of cavities, for instance; and thus, a greater than natural quantity of fluid is formed by them. Where the absorbents are considered most in fault, it by no means necessarily follows that this is the case. Let them perform their important functions perfectly well, there may be mechanical obstructions to the free discharge of their accumulated contents near their termination. The absorbents in such a case may even act with more than their usual power, under the influence of remote disturbance, and still accumulation take place. This actually does happen in pregnancy, which is sometimes accompanied by anasarca; for as soon as the mechanical pressure is removed, the anasarca disappears. We are not, however, concerned with the pathology of dropsy. Our author has brought us to its treatment. We shall make some quotations.

'The chief points to be ascertained in employing venesection in dropsy and purpura, appear to me to be first, the nature of the existing causes, whether such as would affect the quantity or quality of the circulating mass, either by obstruction to its natural outlets, or injury of any of the functions by which its healthy state was preserved.—Secondly, that the state of muscular power, or capability of vascular action, as evinced by capability of exertion, and by a vigorous resistance in the vessels to the morbid accumulation of their contents be not materially impaired.—And lastly, that the patient expresses relief from the blood drawn on the preceding indications, that it be firmly coagulated, and if buffed, it will afford additional grounds for hope of further relief by the repetition of the remedy.

'The indications therefore of blood-letting in dropsy and purpura should be, strength of the patient not materially diminished, increased vascular action evinced by strong pulse and increased temperature, relief of oppression, and of pain immediately felt after the operation, and the subsidence afterwards, though not for a few hours perhaps, of the dropsical swellings.'

'The precautions suggested by the cases of dropsy and purpura, where bleeding was employed, deserve attention here. In the second case of dropsy and purpura combined, a temporary cessation of the pulse succeeded venesection; it might therefore be adviseable, in such instances, either to take blood very slowly from a vein, or by the application of leeches, or cupping to the external parts, assisted by alterants, rather than to risk a similar remora, and perhaps coagulation of a part of the sizy mass in some large blood vessel, or in the heart itself, and thus lead to fatal consequences.

'Another caution in blood-letting was suggested, both in the dynamic and adynamic cases by the first effects of bleeding on the extravasated fluid, which during that evanescent vascular excitement that succeeded the operation, was found considerably increased; care should therefore be taken in prescribing bleeding in dropsies, where the cavities engaged contain a vital organ, that the extravasated fluid be not in such excess as that by any momentary increase it might overwhelm a vital function, and thus cause sudden death. When such a cavity appears distended by hydropic effusion of the dynamic kind, I have thought it always advisable to precede venesection by topical bleeding and blisters, and by the internal use of digitalis and antimonials, the *modus operandi* of which will be presently considered.

'These remarks obviously apply principally to dynamic dropsy and purpura, and the practical suggestions respecting blood-letting in the adynamic form of those diseases, especially when gangrene threatens, may be again considered when treating on succeeding remedies, which I believe often to be chiefly useful by changing the adynamic to the dynamic form of these diseases.

'In concluding these precautionary remarks on the blood-letting in dropsy or purpura, I may further observe, that in all cases in which that remedy is prescribed for the relief of these diseases, the finger of the prescriber should be kept constantly during the operation on the radial artery, that its effects on the powers of circulation may be thus immediately ascertained, and that its safety or danger may be thus decided upon. If the pulse remains firm the quantity of blood may be allowed to flow on to ten, twelve, or fourteen ounces, according to the urgency of the symptoms, but should be stopped as soon as the vigour of the circulation begins to fail.' pp. 152—161.

Local Bloodletting. This is a useful remedy in these diseases. There can be little question when it is indicated. It may be employed along with venesection, when that does not relieve local pain; or alone when the symptoms, time of the disease, or other circumstances contra-indicate general bloodletting.

Dr S. next speaks of blisters; of their utility when applied to the right hypochondrium, in dropsical effusion, connected with diseased function of the liver, marked by grass green vomiting or purging as in hydrocephalus, &c. Antimonials, mercury, and digitalis, are among the other means enumerated, and their utility shown by references to, and details of cases. The volume closes with pathological observations, &c. on an epidemic influenza which prevailed in Ireland in 1822, with a table of diet, and formulæ of medicines. With these last we shall not detain our readers. It is in the section on treatment of dropsy and purpura, that the author refers most frequently to his favourite notion, the changes of the blood in disease. He even uses the old term *lentor*, though *cohesiveness* is the more common word. He is aware of the odium he exposes himself to by his leaning to the *Humoral pathology*. He has no respect for it in the excess in which it was held by its first advocates. But he thinks in passing from an extreme, pathologists fell into another. That, finally, much light may be thrown on disease by a study of the changes the blood manifests; and we are disposed to think there is ground for this opinion.

SELECTIONS.

Documents relative to the History of the Malignant Puerperal Fever which prevailed in the Lying-in-Institution in Vienna, from the beginning of August to the middle of November 1819.

[From the Edinburgh Medical and Surgical Journal.]

THESE documents are published in the Medical Annals of the Austrian States, first volume, new series, 1822, and consist of, 1*st*, A description of the disease and its progress, extracted from a Report to the government of Lower Austria by Dr Raimann, Director of the General Hospital of Vienna, and Professor of Clinical Medicine; 2*d*, History of the disease from the beginning of August, to the middle of November, by Dr Boër, Professor of Midwifery; 3*d*, Report of the appearances observed in the dissection of those who died, by Prosecutor Biermayer; 4*th*, Report of a Committee appointed to investigate the subject.

We have translated literally the two last documents; the last, as containing a summary of the whole observations made, and the preceding, as containing the most extensive and indisputably authenticated account of the organic pathological effects of this dreadful malady.

For understanding the relation of the various Hospitals and Institutions mentioned in these Reports, it is necessary to mention, that in the great General Hospital of Vienna, there is a separate Institution allotted for the teaching of midwifery, and that there are other lying-in wards in the hospital, not connected with the school. For distinction's sake, we have designated the former, to which the disease was almost confined, by the title of the Institution, or Lying-in Institution.—*Editors.*

Report of the Dissections of Women who died in Child-bed in the General Hospital of Vienna, from July 26th to the end of August 1819. By Prosecutor Dr Biermayer.

There were opened during this period 56 puerperal women.

Of this number were from the Lying-in Institution -	38
From the Clinical Ward of Professor Raimann - -	3
From the division of the Lying-in Hospital of Dr Pelham	1
From the division of Dr Schiffner - - -	11
From the division of Dr Festi - - -	1

From the division of Dr Belletzky - - - 2

Of this total number, three cases came into the hospital after having been delivered in private.

They were mostly between twenty and thirty years of age; three were eighteen, one nineteen, six above thirty, and two forty.

All were well formed; most of them of a full habit of body; only three emaciated.*

In all were observed many livid blotches over the whole body, and rapid putrefaction soon after death; in most of them immediately, so that in a few hours the bodies could scarcely be opened.

In all there was a bloody discharge from the mouth and nostrils.

In all the belly was more or less greatly distended, except in two, who had been delivered a considerable time before death.

The parts of generation were every where more or less swollen, discoloured, reddish, and foul; four were syphilitic.

Marks of blood-letting appeared in 13; of leeches on the abdomen in 7; of blisters alone in 17; and of both cupping and blisters in 12.

In the head, the organs were always turgid with blood; the ventricles generally contained more than the usual quantity of serum; in other respects there was nothing worthy of notice in reference to this disease.

In the trachea there was generally found a sanguineous fluid, and its internal surface was reddened.

The lungs were always in the greatest state of expansion, turgid with blood, frequently adhering or united by effused lymph to the pleura, which was generally, but not in all, slightly red.

In the cavity of the thorax and pericardium, there was invariably more than the usual quantity of bloody serum; the pericardium in no case morbidly changed, nor the heart externally, but its substance, without exception, more flaccid and tender than in the healthy state. Its internal surface, particularly the valves, chiefly of the right side, of a deep red, often of a black colour; the mass of blood generally fluid.

In the abdomen there were only two cases in which there was no unnatural fluid, *i. e.* in those cases which had been delivered a considerable time before death. In all the rest there was found from one to two quarts of turbid, very fetid fluid mixed with portions of coagulated lymph, and sometimes purulent matter; the latter appearance was observed in those case, where powerful antiphlogistic means had been employed, and which had survived longer after delivery.

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* This fact is inconsistent with the opinion advanced by Prof. Boër, that want, hard labour and misery, were the causes, at least the predispository causes of this disease.—*Editors.*

The peritoneum, omentum, and mesentery, exhibited, in five cases only, no appearance of redness; in the rest it was always somewhat more or less red, particularly towards the pelvis; and they were often agglutinated with the adjacent parts.

With the exception of two cases, the stomach and intestines were always much distended with air, and their external surface more or less red. *Lumbrici* frequently appeared in great numbers, not only in the small, but also in the large intestines, in the stomach, rectum; and, in one case, in the nostrils.

The liver and spleen were always similarly affected; they were much more pale, flabby, and tender than in their healthy state; easily broken down with the finger, similar to the degeneration of the uterus, and filled with somewhat fluid blood. These appearances were seen even in those two cases where the abdomen was not distended, nor contained fluid, and in which the intestines were healthy. The gall-bladder was always much filled with dark bile. The pancreas always healthy.

The kidneys, in most of the cases, were flabby and tender. The ureters always somewhat enlarged, and red. The urinary bladder always contracted.

The internal parts of generation were every where covered with yellow coagulated lymph, except in the two cases, in which no fluid was found in the abdomen; and in those cases in which strong antiphlogistic means were used, there was frequently a thick yellow purulent fluid often externally on the neck of the womb. The ovaria and Fallopian tubes were always more or less swollen, red and tender.

The uterus, in all cases little contracted, was more or less red externally, even in those where the delivery had taken place long before, and the abdomen was not otherwise in an unhealthy condition. The substance or body of the uterus was always flabby, tender, easily broken down by the finger; in two cases, full of small holes or cavities filled with stinking blood. In two cases, the uterus, on account of the tenderness of its substance, had burst, during delivery, at its neck; in the one case, the rupture was four inches in length; and, in the other, one inch and a half. The cavity of the uterus was found filled with fetid air several times, particularly in the syphilitic women. Its internal surface appeared generally covered with offensive cineritious ichor or mucus, only seldom with offensive viscid blood. Beneath this, it was always red, discoloured, often as if slightly eroded or ulcerated, the internal membrane very much eroded, and destroyed. Thus, in a woman of eighteen years of age, who had been delivered three weeks, in whom the abdomen was not distended, nor contained fluid, and there was nothing diseased in the abdominal cavity, except the liver and spleen being flabby and tender, the uterus was entirely ulcerated on its internal surface, like the internal surface of one of the large intestines, when covered with ulcerations. She died on the twenty-ninth day. On the fundus of the uterus, there generally remained particles of the placenta and *membrana decidua*, in the form of putrid shreds. The colour of the cervix of the uterus was constantly darker than the rest; and it always was darkest, and penetrated into its substance, at the mouth of the womb, which was likewise much dilated, and often as if destroyed with loss of substance, often cracked, as if rent. The vagina was generally preternaturally red.

Such were the facts carefully abstracted from the whole fifty-six dissections.

Report of the Committee appointed for a more Minute Investigation of this Disease.

By a government order of the 27th August, a Committee, consisting of Baron Von Matoschek, Vice-Director, Professor Hartmann, and the provisional Hospital Director, Raimann, was appointed to inquire and report without delay;—

1. Whether an epidemic disease and great mortality has occurred among the women delivered in the Lying-in Institution of the Midwifery School in the General Hospital of Vienna? and, if so,

2. Whether the epidemic and great mortality occurred only among those delivered in the said Midwifery School, or also in the other Midwifery departments of the public Hospital?

3. To what causes and circumstances the frequent disease and great mortality among those delivered might be ascribed?

4. What is to be done to check both?

Conformably to this order, the Committee met on the 28th August in the Midwifery School, and terminated their inquiries on the 31st of the same month. The Committee witnessed the dreadful spectacle of a disease which hurried inevitably to the tomb, in the prime of life, those seized with it. On the very first day they saw five corpses, and scarcely as many patients.

They had an opportunity of examining it in its commencement, *acmé*, and last stage.

The beginning and progress of the disease, reckoning only from the period when it assumes the appearance of a febrile affection, (for according to the assertion of Professor Boër, the accession of the fever is always preceded by marked changes in the whole system, and particularly in the uterus), indicate clearly an inflammatory state. The symptoms were such, that the inflammation of the uterus and peritoneum, combined with high fever, could not be mistaken. The lochia disappeared either immediately, or in a few hours; and the mammæ were found empty of milk, loose, and flabby. But the most alarming circumstance was, that while the disease was yet, in all appearances, a recent acute inflammation, Dr Boër, on examination with the finger, already discovered, in the mouth of the uterus, marks of gangrenous disorganization, which were rendered evident even to the bystanders, by the putrid smell of the finger.

Those patients who were in the last stage presented all the symptoms of effusion into the thorax and abdomen, extreme debility of the powers of life, and gradual dissolution. This view of the disease was in every respect confirmed by appearances found in the bodies of the deceased, seven of which were examined in the presence of the committee. The very rapid putrefaction of the body taking place in a few hours after death —the dissolved state of the blood—the strikingly soft and tender state of the whole bowels, the heart, lungs, liver, spleen, kidneys, and particularly of the uterus,—indicated a colliquative putrescent condition of the whole system, induced by the disease. There were found, moreover, in the cavities of the breast and abdomen, effusions of brownish serum, generally mixed with coagulated lymph. On the peritoneum and ovaria were traces of inflammation, more or less evident, and the internal surface of the uterus was destroyed by gangrene, which was, in every instance, most strikingly marked at the *os uteri*; so that it appeared as if it spread from this point as from a focus. Exactly the same appearances were found, according to the unanimous testimony of Professors Boër and Biermayer, in all the dead bodies, fifty-six of which were opened from the 26th July, the day the disease broke out, till the 31st August, when the committee terminated the investigation, as the extract from the register of dissection shows.

The treatment of the disease, according to the report of Professor Boër and his assistant, confirmed by Dr Raimann, had hitherto been chiefly antiphlogistic. They employed in most cases, immediately on the commencement of the disease, repeated venesections, the application of leeches, emollient cataplasms, emollient clysters; at a later period, blisters, with the corresponding internal remedies; in some cases calomel and other celebrated remedies; and in some, where gastric affections at first predominated, emetics and other appropriate remedies were given. On the commencement of debility, they had recourse to diffusible stimulants, but always with the same unfortunate result; the only difference being, that some were carried off by the violence of the disease very quickly, even in a few days, and one in six hours, others more slowly. The chief physicians, Schiffner, Festi, Belletzky, and Director Raimann, were not less unfortunate in the treatment of those pregnant women whom they took out of the Institution into their respective divisions of the Hospital. Notwithstanding the meritorious and scientific exertions of these able practitioners, all of their patients died.

There were delivered in the Institution in July, 187; in August, 231; in all, 418. Forty-three of these died from the commencement of the epidemic, *i. e.* July 26th, consequently about one in five; while in the lying-in wards of the public hospital, of about forty women who were delivered in them, only one was seized and carried off by this epidemic; from which it appears that this excessive mortality was confined to the Lying-in Institution.

From all that the committee learned, the causes of this mortality could not be attributed to any want of attention, or of careful treatment and nursing, but chiefly to the malignant nature of the disease itself, highly inimical to life, which, at the period when, in consequence of marked symptoms, it became an object of observation and treatment by the physician, had already produced incurable disorganization in one of the most important organs of the female system; for, according to all the observations of Dr Boër, the mouth of the uterus exhibits, even on the breaking out of the fever, undeniable traces of putrescency. In this state of the matter, it is of the utmost importance to detect the causes of this dreadful malady, so that we may use the most powerful prophylactic means to counteract them, as all attempts at cure have hitherto completely failed. But even on this point the committee are involved in great difficulties. In the Institution they found nothing obvious, at least to the senses, that could be considered as the cause of so desolating a disease. According to the opinion of Dr Boër, the pregnant women brought the germ of the disease with them into the Institution, and the process of delivery was only the occasion of its perfect development; for by far the greater number of these women, previous to their admission into the Institution, felt many symptoms of a diseased state, generally burning heat in the abdomen, and in the region of the pubes, combined with great uneasiness, and frequent slight shiverings, distressing pain in both shoulders; and the greater number brought with them into the hospital, even erythematic spots on the hands and feet, chiefly upon the joints. Most of those, 40 in number, who fell a sacrifice to this disease, were persons who had experienced, during their pregnancy, many adverse circumstances, and came into the Institution only 6, 12, or 24 hours before their delivery; and in whom, on the 1st, 2d, and at latest, on the 3d day, indications of the disease already appeared; some even died in from 12 to 24 hours after the first accession of fever, one in six hours after delivery, one during the labour pains, and in one the uterus was burst during a slight bearing down pain, by which the fœtus escaped into the abdomen. These three bodies showed on dissection, the previously diseased state of the uterus. Of those admitted several weeks before delivery, thirteen only were seized with this fatal disease. It may easily be conceived, that in pregnant women who are badly nourished, undergo hard labour, vexation and care, and live not unfrequently in low, damp, close dwellings, under the influence of excessive heat and continued moisture, such as occurred this summer, a gastric and scorbutic diathesis may be developed; nor is it less conceivable, that if inflammation occur in such a diathesis, it must have the greatest tendency to gangrenous disorganization, particularly if scarlet fever and erysipelatous eruptions prevail, as this summer evinced.* But shall a disease, which in every individual seized with it, terminates in gangrene of the organs chiefly affected, and in destruction of the whole organization, which appears as a highly malignant, we may say pestilential, fever, not also at last generate contagious matter, since it is universally allowed that gangrenous and putrid fever very readily produces contagious matter?

This question was brought under consideration by the committee; but Professor Boër declared, that up to this period he had never observed any trace of contagion.

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* That the mode of life had no concern in the evolution of this disease, was put beyond a doubt by our unfortunate experience in this city, when it spared neither high nor low, rich nor poor, those delivered in hospitals, in the city, nor in the environs, neither the gay and dissipated, nor the most retired and domestic. EDITORS.

The Committee very readily admit, that the opinion of such a man as Professor Boër, who had so many opportunities of observing this disease, and has so admirably described it, merits the first attention in regard to its nature and origin. But they still retain reasonable doubts of its non-contagious nature, on the following grounds.

1. If this disease were wholly the consequence of an indigent, hard and laborious mode of living, combined with the influence of the *constitutio annua*, Why does it not more frequently occur out of the Institution, in married women of the poorer classes of society who are exposed to the influence of the same prejudicial circumstances?

In the bills of mortality of the city of Vienna, there were in the course of this month few cases of death among parturient women.

2. Why did the disease prevail with such violence in the Institution, while, during the month of August, in the detached wards of the public hospital for lying-in women, received as boarders, scarcely a trace of it was seen? In the Institution, during the course of last month, one in five parturient women died, while in the other wards, of forty delivered, only one was seized and carried off. It is true, that into the latter, there were admitted only women who paid, and we may suppose therefore that they lived in less distressed circumstances, and that in them the disposition to this disease was not so easily unfolded. But the Institution had also a certain number of patients who paid, and in these the same proportion of disease and deaths took place during August, as in those that did not pay; of thirty paying patients six died, or one in five, being the same proportion as in the gratuitous patients.

3. A fact related by Dr Schiffner, who superintended the third medical division of the public hospital, could not fail to excite the attention of the committee. This physician received eight puerperal patients from the city into his division, most of whom had left the lying-in hospital only a few days before. Of these eight there died one, in whom there had been formed, when in her lodgings, a deposition of milk in the right thigh; (Plegmatia dolens? *Edit.*) two have already left the hospital cured; and two were still in danger on the 31st August; the remaining three, although malignant symptoms accompanied their disease, were convalescent; and yet this physician lost all the puerperal women who were brought directly out of the Institution into his division.

4. Has not this disease, in respect of its nature, malignity,

and the obvious changes which it produces in the organs affected, a striking analogy with other diseases evidently contagious, *i. e.* hospital gangrene, typhus, and even the exotic pestilential diseases?

But if from all these circumstances suspicion at least must arise that the malignant puerperal fever in the Institution, although not produced in every case by contagion, was multiplied and as if domiciliated in it by contagion, it becomes indispensably necessary to do all that circumspection demands in so important a case by employing in the Institution those measures by which the spreading of such a contagious disease may be powerfully checked.

The committee have in the mean time ordered, together with the measures known to every physician, that all newly admitted patients, as well as those previously admitted, in whom the precursory symptoms of puerperal fever appear, be put into a particular lying-in ward appropriated for them; and that the greatest precaution be also observed in examination by the touch, in order that the disease may not be communicated to those in health from patients in whom are discovered marks of putrefaction at the mouth of the uterus.

In cases brought on by misery of life and atmospherical influence, the Institution can do nothing effectual in the way of prophylaxis, as the Institution has no cognizance of the pregnant women at the period when the disease becomes developed in their system.

It is more difficult to point out an effectual method of treatment when the disease is present, as its malignant and complicated nature is evinced on the one hand by inflammatory irritation, and on the other by simultaneous putrid solution, excessive propensity to effusion in the pectoral and abdominal cavities; and its extremely rapid course in so many cases, opposes so great impediments to every attempt at cure. In each individual case this must be left to the judgment of the experienced and skilful practitioners who superintend this Institution.

BARON VON MATOSCHEK.

Vienna, 6th September, 1819.

Observations on Hydrocephalus Internus, with Cases. Read before Dumfries Medical Society, 4th November, 1822. By William Maxwell, M.D.

[From the Edinburgh Medical and Surgical Journal.]

THE following communication consists of observations on the treatment of that state of the brain expressed by a coincidence of symptoms which are generally found after death to have accompanied a deposition of water in the brain or cerebellum, but which occasionally prevail without effusion of fluid; death appearing in those cases to have been occasioned by inflammation of the substance of this organ, or of its membranes, or by abscess, hydatids, encysted tumours, &c. I am, from this circumstance, disposed to use the term Hydrocephalus Internus, more in an abstract sense than as an expression strictly derivative.

In the year 1795–6, previous to beginning regular practice, I saw about twenty-five cases of hydrocephalus internus, all of which terminated fatally. From this it was evident that the modes of treating this affection were inefficient, and that hopes of removing the disease must be founded on some new or more active treatment; as in many of the above cases the patients had in an early stage been very freely purged, bled with leeches, and in the arm; and in others a diarrhœa had prevailed from the first attack, and continued to an advanced period of the disease. It was thought proper to employ very copious blood-letting in the way by which the largest quantity of blood could be rapidly abstracted from the head: this mode of treatment exceeded expectation, and was done in the following manner: And, as there was considerable danger of the patient sinking from inanition, it was thought a necessary preliminary to obtain the full consent of the parents to a measure attended with much hazard, and extremely painful to the feelings of the practitioner, by informing them, that after the usual mode of purging, moderate bleeding, &c. this distressing measure was the only mean by which the life of the patient could be preserved. I shall, out of nearly ninety cases, about sixty of which recovered, select two wherein the usual characteristic symptoms of the disease were distinctly marked.

Master J., æt. 7, a healthy boy, became dull and indisposed to his usual exercise, complaining of headach, which, with much langour, increased during six or eight days. The bowels were frequently moved by purgatives. At this period pain in the head became more distressing, and the bowels were difficultly moved. The boy showed no inclination to leave the house;—he rested frequently his head in his hands upon a table, or in a kneeling posture on a chair; the muscular power of his limbs began to fail; the pulse became rapid; pain of the head excessive, with occasional remissions, and during these, constant drowsiness came on. Still, however, there was a considerable disposition to take food, although it was passed half digested. The mind now became indistinct, with inability to articulate; vision was imperfect; the evacuations took place without his attention; squinting next appeared; pulse 160—frequent expression of pain in the head; muscles in the neck became supple, the head rolling upon the breast and shoulders, with immobility of the pupils and total want of expression in the eyes; the face pale and inanimate. Mr J., his father, a medical gentleman, requested that I would take the sole direction of the case, observing, that he was well aware that extreme bleeding was the only means by which the child could be recovered; desiring that it might be carried to whatever extent it might be thought necessary, and that, if the child should sink under such active treatment, he would still retain a warm sense of gratitude for the painful task which he had imposed on me. The time was fixed for the operation, and, with the father's consent, I invited my medical friends Dr G., Mr S., Mr M. and Mr St., to be present. The father, after providing every thing necessary, withdrew to a remote part of the house, waiting, with the anxiety of an affectionate parent, the fate of an only son.

The boy was laid on a mattress, his head somewhat lower than the rest of the person, medical gentlemen holding each wrist; the jugular vein on the right side was opened; it bled rapidly—the stream was frequently interrupted to prevent fainting. The bleeding was continued till syncope began to take place: a little negus was then given; when the pulse revived the finger was removed from the orifice and the blood allowed to flow till the gentlemen agreed that the pulse could no longer be felt. The patient at this time had no appearance of life, and continued without the least symptom of animation for ten minutes, when he began to revive gradually: and in the evening more favourable symptoms appeared. His mind was remarkably improved, as well as his physical powers, being now able to articulate, although indistinctly, and to tell the hour on a watch. He had a tolerable night's rest, having taken frequently a little water-gruel and beef-tea. During the following day there was but little improvement. On the third day the bleeding was repeated in the left jugular vein, and a complete recovery followed.

Case II.—In April 1816, I was called to see a child of Mr B. ætat. 1¼. He had been affected with symptoms of hydrocephalus about seven days, had been repeatedly purged, and bled profusely on the head by leeches. I found the child very languid, insensible to moderate pressure or pinching; vision appeared to be entirely gone, eyes death-like without any expression; squinting with both eyes had continued during three days; uttering frequently shrill screams; the head rolled upon the shoulders as if it had been attached to the trunk by muscle alone. He was bled in the neck, as in the last case, till the pulse could no longer be felt, and remained in this state during some hours before he began to revive. I left him at 11 *p. m.*, and was so apprehensive that bleeding had been carried too far in this case, that I sent my servant next morning to enquire what had happened during the night, and was surprised by learning through him, that the child was so much better, that he saw him at the window in the nurse's arms, looking at two young cocks fighting in the yard. He recovered daily, and is now a fine healthy boy.

In upwards of ninety cases that have been treated in this way, above sixty have recovered. In most of these I have had the assistance of one or more medical gentlemen of this place. Bleeding was generally repeated, as the constitution could seldom bear at one operation a subtraction of blood sufficient to remove the malady.

It may fairly be objected to the success of this treatment, that hydrocephalus internus did not exist in the above sixty cases, but that other causes might have produced delusive symptoms. I confess that I cannot give an answer sufficiently satisfactory, and that I cannot meet the objection by any better proof than by analogy, for, owing to the aversion that prevails in this part of the country to the examination of the dead, it was with much difficulty that I was allowed to inspect seventeen or eighteen heads out of the twenty-seven. In all of these, with the exception of eight, from one to four or six ounces of fluid were found in the ventricles or within the membranes. As the cases of recovery did in almost every symptom resemble those that terminated fatally, where the heads were allowed to be opened, we may analogically be allowed to infer that the disease in both was the same; and, without better proof, to consider such close analogy a legitimate conclusion. In the other eight cases, above alluded to, the quantity of water did not exceed half an ounce. In the first of these, a cyst, containing about four ounces of fluid, communicated with the right lateral ventricle: death took place at the end of seven months. In the second, there was suppuration in the middle of the right lobe. In the third, three round tumours of indurated cerebrum were found in the cerebellum. In cases fourth, fifth and sixth, much inflammation of the membranes and substance of the brain had existed. In the seventh, suppuration in the *thalami nervorum opticorum*. And in the last, excessive inflammation of the membranes, with some pus, was perceived near the *foramen magnum.*

Dumfries, 4*th Nov.* 1822.

Notice of Magendie's Physiological Experiments.—We are well pleased to see experiments made, from time to time, on the inferior animals, for the purpose of elucidating some obscure, or solving some doubtful problem in physiology. But when we observe the whole rising race of candidates for fame rushing impetuously, with knives, needles, saws and poisons, on the living animals around them,—in order to find out some new phenomenon during their torturous experiments, we must pause, and ask, is this the way to clothe the profession in the character of wisdom and humanity as well as science?—we think it is not the way—but our continental brethren are of a very different opinion In Paris, the mania for vivisections is not repressed, but highly encouraged by institutions which, in other respects, are calculated to further the march of medical science—so true is it that there is no unmixed good in this world. The Royal Institute lauds each successive train of experiments on living animals, no matter how directly contradictory of each other they may be—and thus, a constant stimulus is kept applied to the wild and unbridled ambition, (for it perhaps is not entitled to the name of zeal,) of all ranks of the profession in France. In chemical researches and experiments it is far otherwise than in physiological. *There,* no cruelty is exercised, and every new discovery is almost sure to turn to the advantage of the healing art. How far physiological experiments have contributed to strengthen our hands in therapeutics, we leave to the candour of the most enthusiastic of that party themselves.

We have been led into this train of reflection, on perusing the recent experiments of Magendie, as laid before the Institute, and as repeated before several respectable witnesses in London. Should there be no error or deception in these experiments, (which we are very far from vouching,) we are all at sea respecting the senses. The olfactory are no longer the nerves of smell—the optics of sight—the auditory of hearing! The fifth pair, if they do not exercise all these functions themselves, are, at least, the regents of the senses abovementioned. But we must let M. Magendie tell his own story. It was in the attempt to demonstrate the olfactory properties of the first pair of nerves, that our author found out—or thought he found out—that the sense of smell did not essentially depend on the said nerves.

'1. My first experiment was to lay bare the olfactory nerves in a dog, about a year old. I scarcely expected to find them sensible to the contact of foreign bodies, or even to pricking, the hemispheres of the brain being insensible to such means of irritation throughout the greater part of their mass; and accordingly pressure, pricking them deeply, and tearing them in various ways, produced no effect which indicated sensibility of these nerves. I was curious to see whether the direct contact of a very odoriferous body would afford the same result:—I therefore poured some drops of ammonia upon the nerve; at first the animal seemed not to perceive it, but soon showed proofs of lively sensation. I immediately discovered that the liquid had flowed over the sides of the nerve, had reached its lower surface, and consequently was lodged in the pit of the ethmoid bone. I then was of opinion that the ammonia had acted on the medullary part of the nerve, which we know is expanded upon the cribriform plate, and that at least the white inferior surface of the nerve possessed sensibility, if the cineritious substance of the upper surface did not.

'2. After these observations, I entirely destroyed the olfactory nerves, persuaded that I should then abolish completely the sense of smell. What was my surprise, on examining the animal the following morning, to find that he was yet sensible to powerful odours which I presented to him (such as ammonia, acetic acid, and the essential oil of lavender, &c.) The sensibility of the internal cavity of the nose had lost nothing of its energy: when a probe was introduced, the effects were exactly similar to those in a dog which had not been touched. This extraordinary phenomenon recalled to my memory a fact which I had passed over without much attention last year, because it stood so much opposed to received opinions, that I attributed the occurrence, I know not why, to some fault in the performance of my experiment. I allude to a duck, which survived for eight days after I had removed the hemispheres of the brain, presenting many curious phenomena. Among other singular circumstances, it still retained the power of perceiving strong odours. I exhibited this animal, and subjected it to various proofs of this, in the course I was giving at the time.

'To be better satisfied of the fact, I destroyed the olfactory nerves in many other animals, and the results were exactly similar; but I made the important remark, besides, that the sensibility, which I had before observed at the inferior surface of the olfactory nerve, extended only along the outer border of the cribriform plate; and from this I was led to conjecture, that the sensibility might belong not to the nerve of smell, but to the branch of the ophthalmic which passes from the orbit into the nose through a fissure in the cribriform plate.

'3. From this suggestion I was led to suspect, further, that the branches of the fifth pair, which are distributed among the cavities of the nose, are the organs by which the sense of smell is maintained after the destruction of the first pair of nerves. These branches in man are pretty numerous, though not very large; they consist, 1st, of the ethmoidal branch of the nasal: 2dly, the naso-palatine branch described by Scarpa: 3dly, of numerous branches which arise from the internal surface of the spheno-palatine ganglion. These nerves coincide in so far that they are all distributed upon the pituitary membrane.

'I was not aware of the exact manner in which the fifth pair gives its branches to the nose of the dog, and I requested M. Desmoulins, who is well skilled in these researches, to dissect this nerve in the dog along with me. We discovered that the ethmoid branch is much larger than in man, and that it supplies a considerable number of small branches to the uppermost part of the nasal cavity; we found besides that there is no spheno-palatine ganglion on the superior maxillary division, but that it sends numerous branches of considerable size, which are distributed on the inferior, lateral, and internal parts of the nose.

'4. It was then anatomically possible that the whole sensibility of the pituitary membrane might depend upon the divisions of the fifth pair. But conjectures concerning organic functions, derived from anatomy, are worth nothing until they are proved by physiological experiments. I therefore thought of cutting the fifth pair of nerves, in such a manner that the animals might survive. This was more easily said than done. The nerves, as they pass out of the base of the skull, are embraced by the cavernous sinus and the internal carotid artery. Nevertheless I made the attempt in several rabbits; and had the good fortune to succeed in cutting them on both sides, in a number of animals, without producing any very serious injury. I made the same attempt on puppies, kittens, and guinea-pigs, and, when the nerves were once well divided, I was able to assure myself that every trace of the action of powerful odours disappeared. The same animals, which, before the experiment, sneezed or rubbed their noses, or turned away their heads, when they were made to inhale ammonia or acetic acid, &c., continued perfectly undisturbed, when the fifth pair was divided, or only showed symptoms of the odour having affected the larynx. *The result of this experiment, in counterproof of the preceding, appears to me to shew, that the sense of smell, as far as regards powerful odours, depends upon the branches of the fifth pair: and that the first pair of nerves has no share with the fifth in bestowing this function.*

'5. Here an objection presents itself. The odours employed, it may be said, are very active: they produce a chemical action upon the pituitary membrane just as when they come in contact with the conjunctiva. Is it not possible, when you destroy the sense of touch in the membrane of the nose, that you deprive it, not of the power of perceiving odours, properly so called, but rather of its sensibility to the impression of pungent and caustic vapours; such as those of ammonia and acetic acid? This remark may apply to these two vapours, but not to the oil of lavender or of dippel. At any rate, before the performance of these experiments, it could scarcely have been presumed, that irritating vapours did not act on the sense of smell.

'6. For the purpose of doing away with this difficulty experimentally, I destroyed, by bruising them, (en les broyant) the olfactory nerves in a setter, the fineness of whose nose is well known; and I observed just as in my former experiments, that he could easily perceive powerful odours. But I was desirous of ascertaining whether he could distinguish the smell of meat, or cheese, or food in general. With this intention I enclosed portions of these in paper, and placed them before him; he invariably tore off the paper, and then devoured the contents. Yet I cannot regard this experiment as satisfactory, because the dog, in other circumstances, did not appear able to detect, by its smell, food placed near him without his knowledge. Supposing this last result to be correct, it does not prove, however, that the fifth pair is not the agent of the sense of smell, because the injury which is necessary to destroy the olfactory nerves, necessarily produces inflammation within the cavity of the nose, quite sufficient to injure, in a secondary way, the power of smelling. This subject I am pursuing at present. In chickens, ducks, and magpies, I removed the lobes of the brain with the whole of the olfactory nerves. They continued to possess all the sensibility which belongs to the membrane of the nose, and manifested evident signs of the action of powerful odours on the sense of smell: I cannot comprehend how the contrary has been lately published.

'7. To M. Ramon, medical inspector of the Maison Royale at Charenton, I am indebted for a fact which appears to me to prove, that the integrity of the hemispheres of the brain is not indispensable for the exercise of smelling. It is common to see patients, who have been afflicted for several years with madness, fall suddenly into a condition of dullness and torpidity analogous to complete drunkenness; their limbs totter, their motions are not under their control, and their speech is disturbed; this state, which is beyond the power of relief, is followed by an entire loss of the intellectual faculties, and not long afterwards by death. On examination, the hemispheres are found gorged with blood, the membranes inflamed, and the cortical substance deeply altered. M. Ramon has observed in such individuals that the sense of smell continued, not only with regard to powerful and pungent odours, but also to such as are much more transitory.

'Such are the observations concerning the nerve of smell which I present to physiologists: they are as yet incomplete, and require to be followed up. I hope, however, that they may induce others to repeat them, and not to neglect an opportunity of confirming or invalidating them, by pathological observations.

'8. From these researches it likewise follows, that animals, such as the dolphin, in which there are no olfactory nerves, are probably not deprived of the sense of smell, notwithstanding what has been asserted by naturalists. If it be confirmed that the faculty of smelling belongs to the fifth pair, we have still to enquire, what can be the use of the olfactory nerves and their lobes. Nothing hitherto is known which is likely to point out the way to us, in which case they would require to be added to the list of those parts of the nervous system concerning the functions of which we are still entirely ignorant.'* 35.

The next train of experiments which M. Magendie instituted, were on the influence of the fifth pair of nerves on the nutrition and functions of the eye.

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* Vide Med. and Phys. Journal for July.

After dividing the fifth pair of nerves, within the cranium of a rabbit, our author found that all sensibility was lost on the same side of the face, the inside of the nose, the surface of the conjunctiva, &c. Even ammonia applied to the eye made no impression, while in the other eye it produced violent lachrymation. On the side of the divided nerve the eye was dry, there was no winking of the eyelids, the ball of the eye seemed to have lost all motion, the iris being strongly contracted and immobile. Next day, when the animal was examined, the sound eye was found inflamed by the ammonia, the other presenting no phenomena of the kind. 'The section of the nerves had thus prevented the development of inflammatory action.' To enable him to study these various phenomena with care, he that day cut the fifth pair in a number of rabbits—in some, on one side—in others, on both. It was by observing these animals during the following days that he was led to discover the facts now to be stated.

'Twenty-four hours after the division, the cornea begins to become opaque, at the end of seventy-two hours it is much more so,—the opacity increases, and five or six days after the operation it is as white as alabaster.

'From the second day the conjunctiva becomes red, appears inflamed, and secretes a very abundant, milky, puriform matter: the eyelids are either wide open and motionless, or else they are sealed by the puriform matters which have dried between their edges, and when they are separated a considerable quantity of matter above described escapes.

'Towards the second day after the section, the iris is likewise observed to become red, its vessels are developed, and, in fine, the organ inflames.—False membranes are formed on its anterior surface, which, like the iris itself, have the appearance of a disk pierced in the middle. These adventitious membranes at length fill the anterior chamber and contribute to the opacity of the cornea. Is it not a very extraordinary phenomenon to witness an active inflammation with suppuration, and complete insensibility of the part inflamed, which are caused by the division of a nerve? Before going farther, I would mention that this rapid opacity of the cornea at first appeared to me to depend upon the prolonged contact of the air. To ascertain this, I cut the seventh pair in a rabbit, which, according to Mr. Charles Bell, governs the movement of winking: but, although the eye of this animal remained constantly exposed to the air for many days, no opacity of the cornea took place; nor any inflammation either of the conjunctiva or of the iris. I then suspected that the opacity depended on the want of the secretion of tears. It is possible, said I, that a membrane such as the cornea may have occasion to be constantly soaked by a limpid fluid to maintain its transparency. To ascertain if my conjecture had any foundation, I completely removed the lachrymal gland in two rabbits, but no opacity of the cornea was perceptible during eight days that they survived this extraction. My supposition therefore was without foundation. The opacity of the cornea, the inflammation, and the suppuration of the conjunctiva and of the iris, were thus found to depend upon nervous influence.

'Towards the eighth day after the section of the fifth pair the iris becomes visibly altered; it detaches itself from the sclerotica, and its centre ulcerates: at the end of two or three days the humours of the eye, being muddy and partly opaque, make their escape, and the eye is reduced to a small tubercle, which only occupies a very small part of the orbit, giving something hideous to the aspect of these animals. If the eye be now dissected, it is found to contain nothing but a matter which resembles cheese newly coagulated, and that the retina has almost entirely disappeared; a trace of it here and there is all that can be seen.

'Vision appears to be, if not entirely lost by the division of the nerve, at least very much weakened, and if, some hours after the operation, a sharp instrument be pushed against the surface of the retina, the animal gives no mark of sensibility;—when both nerves are cut in an animal, he appears blind, and his gait is very singular: he only moves with the chin strongly pressed against the ground, pushing his head before him, and using it as a guide in the same way as a blind man does his staff. The conduct of an animal in this state differs entirely from that of one simply deprived of sight, the latter easily directing itself by means of the moustaches and of the sensibility of the skin of the face: he stops before holes, perceives obstacles,—in short, it would often be difficult to know whether he was blind or not. Whilst the animal in whom the fifth pair has been divided has only one way of moving, and instead of avoiding obstacles, often persists in pushing against them for many hours so as to excoriate the skin on the fore part of the head.

'The tongue is insensible on the side where the nerve is cut, and on either side if both nerves be divided. The animal in this case holds it out of its mouth, but is able to draw it in towards the pharynx. Sapid bodies have no apparent action on the anterior part of the organ, but they have an evident effect upon its centre and root. In dogs and cats, the lower jaw drops, after the intersection of the fifth pair on both sides, which greatly impedes deglutition, and sometimes renders it impossible. They have the same gait as rabbits, but instead of resting on the chin, they often press against the tongue which gets underneath, in consequence of the dropping of the jaw, and is rubbed against the ground during progression.

When only one nerve is cut, changes take place in the nostrils, mouth, and surface of the larynx of the same side: half of the tongue becomes white, the epidermis becomes thickened, the gums separate from the teeth, and food lodges in the intervals thus formed; probably the animals, being no longer arrested by feeling these substances, push them between the teeth and gums without being sensible of it.

'Observation has led me to believe, *that the division of the fifth pair likewise entails the loss of hearing:* this would be less extraordinary, as in many animals the nerve of hearing is evidently only a branch of the trifacial. *If this last result be correct, all the senses would thus be under the influence of the fifth pair, and the general theory of sensations would require to be reformed.*'* 88.

The fallacy of *experience* has been acknowledged since the days of Hippocrates, and the observation must apply still more strongly to *experiments* than to experience. In M. Magendie's experiments, we think the sources of error were numerous and prolific. When we consider that, to divide the fifth pair of nerves, the operator was obliged to thrust a sharp cutting instrument through the cranium, the middle lobe of the brain, and almost to the centre of the basis cranii, where, in most instances M. Magendie himself opened the cavernous sinus, while dividing the fifth pair, so that the animals soon bled to death:—when we consider these circumstances, we say, how can it be averred that no injury is done to vitiate the experiments? The third and fourth nerves too, lie in such immediate proximity to the fifth, that, although they may not be actually divided, it is highly probable they receive injury, and that thus their functions are disturbed.

But the paramount source of error evidently lies in the confounding common or general, with specific sensibility. Thus the experimenter tells us, that, after destroying the olfactory nerves, the animal was still sensible to powerful odours, as ammonia, &c. This only proves that common sensibility was present, and warned the animal to avoid disagreeable irritation. His own experiment of the dog and the cheese proves this, though in a different manner. The dog tore off the paper that surrounded the cheese, *when placed in his view*, and devoured the latter. This was, or might be, at least, from *sight*, not smell. When the same viands were placed near him, but not immediately in his view, he intimated no consciousness of their presence. In short, we place little confidence in the truth of M. Magendie's conclusions, though we have considered it our duty to lay his experiments before our readers.

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* Vide Med. and Phys. Journal, No. 305.

London Med. Chir. Review.

Physiology and Pathology of the Spleen.—Dr Vetch, Physician to the Charter-house, has recently published a paper in the Medical and Physical Journal, on the above subject. He concurs in the opinion long ago and still maintained, that the spleen, besides its office in health (whatever that may be) serves as a reservoir for the blood when determined suddenly to the centre from the surface by various accidents, as sudden atmospherical vicissitudes ;—or, in certain diseases, as intermittent fevers. But it is to the pathology of this organ that Dr Vetch's attention is principally directed in the paper before us, as he has had considerable opportunities of observation among our troops, after their return from the fatal swamps of Walcheren. The effects of an enlargement or obstruction of the spleen, Dr V. thinks, 'are such as are most universally referred to the liver.' If this be the case, it is doubly necessary to investigate them. But it is to be remembered that, in most of those cases of enlarged spleen, the sequelæ of intermittent fevers, the liver is also affected, either in function or structure, and therefore the practitioner may be led somewhat astray, in keeping his attention strongly fixed on the organ most prominently diseased.

'In enlargement of the spleen, the patient seldom or never complains of much pain in the situation where it might be expected; his appetite is generally good, yet his powers of assimilation are obviously deficient; he loses flesh, and is incapable of any muscular exertion; his features have a peculiar dark, bilious, or mahogany hue, but the conjunctiva preserves its white and healthy appearance; perspiration is in time wholly suspended, and the skin acquires the appearance and feel of satin;* the lips are pale, and there is generally much wasting of the gums; the urine is limpid, and secreted very rapidly, but contains little or no urea. The patient's mind is generally morose and desponding. All these symptoms of a deranged condition of the spleen, prove that, although the patient may exist for a long time without those changes going on in the blood, which would otherwise take place, the powers of life cease to be renewed. An attack of epistaxis,* or the appearance of moisture upon the skin, are generally signs of returning health. The symptoms I have mentioned are commonly attended with coldness of the lower extremities, generally towards evening, and the pulse is quicker than natural.' 443.

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* 'This is observable in convalescents from the remittent fever of warm climates. Vide JACKSON on *Febrile Diseases.*'

A state of the system, such as is above described, Dr V. has often found in connexion with amenorrhœa—in which cases, an occasional acute pain is liable to occur in the region of the spleen, on any slight exertion. A determination of blood to the spleen is often vicarious of discharges from other parts, in which cases, if long continued, the spleen attains a very large size. In the only three cases where our author saw death take place in the cold state of ague, the spleen was so much distended, and its structure so much altered, that it appeared like a mass of dark uncoagulated blood, which crumbled on the application of the finger. There is a particular form of rheumatism (a modification in fact of intermittent fever) which our author has found to be a source of splenic enlargement. The complaint has been endemic in many places from which ague has disappeared, in consequence of drainage and cultivation. It is a rheumatic affection of the muscular fibres, accompanied by great want of energy in the cutaneous circulation. It seems to have a cold and hot stage, inasmuch as the pain is regularly preceded by a coldness of the parts affected, and also of the lower extremities. It is tedious and untractable, and produces enlargement of the spleen. The most frequent exciting cause of all, in our author's experience, is mental depression and anxiety—long famous, indeed, for causing disorders of the stomach, liver, and spleen—but more frequently, we apprehend, the *consequence* of such disorders.

Treatment. Enlargements of the spleen sometimes require evacuations from the neighbourhood, by cupping, leeching, &c. 'but a great part of the treatment must consist in obtaining a regular state of the circulation, and at the same time guarding against all causes of excitement until we have removed every symptom of local congestion.'

'It is, perhaps, difficult to find any one article of the materia medica, which possesses any great tonic power, which will not, in a short time, require to be discontinued, by its diminishing either alvine discharge, or the secretion of urine. I have, however, been fortunate in finding one very applicable to such a state of disease as I have endeavoured to describe; it is valuable as a tonic, and not less so from the diuretic power, which it never fails to exert, if given in the form to which I confine its use. The article on which I have bestowed this panegyric, is a weak infusion of the leaves of the arbutus uva ursi; if the powder of the leaves is substituted, it produces a bitter much too intense to answer the end proposed. I was led to use this medicine extensively, both with officers and soldiers, who had laboured under protracted disease, after the expedition to Walcheren. My subsequent experience has given me ample opportunities of appreciating its value as a medicine, in all cases resembling those I have mentioned. The successive application of small blisters to the epigastric region and left hypochondrium, and the insertion of a seton, are highly useful auxiliaries.' 446.

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* 'This was very common with convalescents from the Walcheren fever.'

Our author hopes he has now said enough to draw the attention of practitioners to the symptoms attending cases where the system seems to have lost its powers of assimilation. Hysteria, hypochondriasis, mental aberrations, and *diabetes*, are to be found 'arising out of primary obstruction of the function of the spleen, as without co-operation of this viscus, the blood ceases to acquire its recrementitious properties, none of the secretions possess their natural constituent parts, and, what is also worthy of notice, external injuries do not produce the secretion of what is called healthy pus.'

We think Dr Vetch's observations are entitled to much attention; but, considering how intimately linked are the liver, stomach, and spleen, in their pathological relations, it is possible he may somewhat overrate the part which the last of these organs plays in the mystic drama of disease.

London Med. Chir. Review.

INTELLIGENCE.

Massachusetts College of Pharmacy.—An institution with this appellation has been organized in this city, and has gone into operation. Its objects are stated in the preamble to the constitution to be ' to provide the means of a systematic education, —to regulate the instruction of apprentices,—to promote a spirit of pharmaceutical investigation, and to diffuse information among the members of the profession,—to discountenance the sale of spurious, adulterated and inferior articles,—to regulate the business as far as practicable and consistent with our social institutions,—to cherish habits of friendly intercourse,—and in general to advance the character and interest of the profession.'

It will be perceived, by the following extracts from the constitution, who are to be considered as candidates for admission by the college, and what course it is intended to take in carrying into effect its principal objects.

' Art. 5. The affairs of the College shall be transacted by a board of Trustees, consisting of six members, beside the officers who shall be ex-officio members of the board, to be chosen annually by ballot, one half at the stated meeting in March, and the other half, at the stated meeting in September. The board of Trustees shall meet once in three months, or oftener if necessary, by adjournment, or by order of the chairman. Six members shall constitute a quorum.

' The board of Trustees shall have power to establish a school of Pharmacy,—to provide suitable apparatus,—to procure a library,—to collect a cabinet of specimens,—to appoint one or more instructers or lecturers, as may seem expedient, on Chemistry, Materia Medica, and Pharmacy, and on such collateral branches of Natural Science as may be useful to an apothecary. They shall appoint a *committe of inspection*, who shall examine all drugs and medicines brought into the market, which shall be submitted to them, and shall report the quality to the board, who shall make it known to the public, whenever the welfare of the community or the interest of the trade require it. They shall also appoint a *committee of equity*, to settle any difficulties which may arise among the members in the course of business, if referred to them. The board of Trustees shall elect all members of the association; and shall adopt rules for the examination of those who shall attend the course of instruction in the school of pharmacy, and for granting diplomas to them.

'Art. 6. Any person, regularly educated as a druggist or apothecary, or who shall have received a diploma from this institution, and shall sustain a good moral character, may be proposed, in writing, to the board, at a stated meeting, for membership by two members of the association. At the next stated meeting, he may be elected a member by ballot, four fifths of the votes of the whole Board being necessary to a choice.'

'Art. 8. Complaints against any member of the College may be made to the board of Trustees for mal-practice and misconduct in the business of his profession; and, if on investigation it shall appear, that he has been guilty of adulterating any articles of drugs or medicine, or of knowingly vending adulterated or deteriorated articles, or those which are otherwise of bad quality, the board may report the facts to a meeting of the association publicly called, when, a majority of *all* the members of the association concurring, he shall be expelled.'

The following are the officers of the College:

Ephraim Elliot, *President*. Robert Fennelly, *Vice President*. Ephraim L. Elliot, *Treasurer*. Samuel N. Brewer, *Secretary*.

Trustees. John Bacon, Daniel Noyes, Henry White, John Thayer, Thomas Farrington, Joseph Kidder.

We are happy to perceive on the list of Members the names of the most respectable apothecaries in this city, and we hope most sincerely that the laudable and truly important objects which they have in view may be fully answered.

Medical School of Maine at Bowdoin College.—The Lectures at this Institution will commence at Brunswick on Monday February 21, and continue three months.

Theory and Practice of Physic and Surgery, by Nathan Smith, M. D.

Chemistry and Materia Medica, by Parker Cleaveland, M.D.

Anatomy and Physiology, by John D. Wells, M. D.

Medical Premiums.—The proprietor of the Medical Recorder, desirous of advancing the science of Medicine through the means of his Journal, and flattered by the reception of the Essay which lately obtained a premium and was published in the last number, proposes to offer a series of others.

Convinced that the promotion of science will be better effected by leaving the choice of the subject to the candidates themselves, as it will enable every individual to exert his talents in a way best suited to promote the object in view, he requests all persons disposed to write for them, to send their communications on or before the first days of January and July, with a sealed letter inclosing the name of the candidate. They will be submitted to the examination of not less than three respectable physicians, who will award the premium to those essays which will best advance the interests of the science—the successful one to be published in the next number after the date mentioned. The amount of each premium will be $50, to be paid to the successful candidate, in medical or other books. The plan will be continued for one year; if successful the value of the premiums will be increased.

The communications, with a sealed note containing the author's name, must be addressed to the Proprietor of the Medical Recorder (*post paid*): the unsuccessful Essays will be returned on application.—*Med. Recorder.*

Medical Prize Question.—The Medical and Chirurgical Faculty of Maryland offer a premium of one hundred dollars in cash, or a Gold Medal, (at the option of the successful candidate) for the best Essay 'on the Pathology and treatment of Cholera Infantum.'

The undersigned have been appointed to award the premium at the next meeting of the faculty.—Candidates for the prize will cause their dissertations to be sent to either of them (postage paid) on or before the first day of May, 1825. Each dissertation to be accompanied by a sealed letter, superscribed with a motto corresponding with that prefaced to the essay. None of the letters except that on which the motto of the successful essay shall be affixed shall be opened; the remaining essays will be disposed of according to the direction of the owners.

NATHANIEL POTTER,
A. ALEXANDER,
THOMAS E. BOND,
EZRA GILLINGHAM,
PATRICK MACAULEY.

Newly Invented Spring Lancet.—A spring lancet has lately been invented by Mr Thomas Williams of Newport, R. I. which is free from the objections justly made to other instruments of this name. It makes an incision of an elliptical form, such as is considered to be best, in using the common or thumb lancet. The depth to which it penetrates may be graduated with exactness. It gives no pain; is not readily blunted; may be used in the left arm as well as the right; and has a decided advantage over a common lancet in opening a rolling vein. This instrument must therefore be considered a valuable improvement; and it should be in the hands of medical practitioners generally.

LIST OF NEW PUBLICATIONS.

AMERICAN WORKS.

An Account of the Yellow Fever, as it prevailed in the City of New York, in the Summer and Autumn of 1822. By Peter S. Townsend, M. D. &c. 8vo. pp. 383. New York.

Institutes and Practice of Surgery ; being the Outlines of a Course of Lectures. By William Gibson, M. D. Professor of Surgery in the University of Pennsylvania, &c. Vol. I. 8vo. pp. 459. Philadelphia.

Florula Bostoniensis. By Jacob Bigelow, M. D. Rumford Professor, &c. Boston. Cummings, Hilliard, & Co.

Strictures on the present state of the Medical Profession among the foreign Practitioners in Havana. By Robert Morgan, M. D. Lec. Art. Obstet. and Member of the Royal College of Surgeons in London. New York : J. Seymour. 8vo. pp. 37. 1824.

Essai sur la Fièvre Jaune d'Amérique, ou Considerations sur les Causes, les Symptôms, la Nature et la Traitement de cette Maladiè avec l'Histoire de l'Epidémie de la Nouvelle-Orléans en 1822, et le Résultat de Nouvelles Recherches d'Anatomie Pathologique, entreprisis pour en determiner le siége. Par P. F. Thomas. Précéde de considerations Hygienique sur la Nouvelle-Orleans, par J. M. Picornelle. 8vo. pp. 138. New Orleans and Paris. 1823.

AMERICAN EDITIONS OF FOREIGN WORKS.

A System of Materia Medica and Pharmacy, &c. &c. By John Murray, M. D. From the fourth and last Edinburgh edition. With Notes and additions by John B. Beck, M. D. Fellow of the College of Physicians and Surgeons of the University of the State of New York, and one of the Editors of the New York Medical and Physical Journal. 1824.

A Summary of Physiology. By F. Majendie, Doctor of Medicine. Translated from the French by John Revere, M. D. Second edition. Baltimore.

Observations on the Surgical Anatomy of the Head and Neck, &c. By Allan Burns. First American edition ; with a Life of the Author, and additional Cases and Observations, by Granville Sharp Pattison, Surgeon, Prof. Surgery in the University of Maryland. 8vo. pp. 512. Baltimore.

FOREIGN WORKS.

Observations on Acute Rheumatism, and its Metastasis to the Heart, &c. By Thomas Cox, M. D. pp. 65. London.

Symptomatology ; or the art of detecting Disease ; a Lecture occasionally read to the Pupils at the Westminster Hospital, and published at their request. By Alexander P. Buchan, M. D. &c. To which are added Tables of Symptoms. 8vo. pp. 190. London.

Select Dissertations on several subjects of Medical Science. By Sir Gilbert Blane, Bart. F. R. S. &c. 8vo. London.

The Principles of Forensic Medicine systematically arranged and applied to British Practice. By John Gordon Smith, M. D. &c. Second edition greatly enlarged. 8vo. pp. 569. London.

Nugæ Chirurgicæ ; or a Biographical Miscellany, illustrative of a collection of professional Portraits. By William Wadd. pp. 276. London.

Practical Observations on the Symptoms, Discrimination, and Treatment of some of the most important Diseases of the lower Intestines and Anus. By John Howship. Third edition. 8vo. pp. 280. London.

A Treatise on the Stricture of the Urethra ; designed as a Manual for the treatment of that complaint, and addressed chiefly to Students and Junior Practitioners. By George Macilwain. 8vo. pp. 138. London.

A Treatise on Syphilis, exhibiting the advantages of large doses of the Submuriate of Mercury in the cure of that disease ; also an Inquiry into the Modus Operandi of Mercury, illustrated by Experiments. By James Boyle, Esq. 8vo, pp. 166. London.

An Essay on the Blood; comprehending the chief circumstances which influence its Coagulation, the nature of the Buffy Coat, with a concise Medical view of the state of the Blood in Disease, and an account of the saturated solution of Alum as a styptic remedy in Hemorrhage. By Charles Scudamore, M. D. F. R. S. 8vo. pp. 162. London.

Observations and Commentaries, illustrating the important advantages to be derived from the improved modern system of Medical Education and Practice. By Adam Dods, M. D. 8vo. Worcester.

Formulary for the Preparation and mode of Employing several new Remedies, &c. By the late Thomas Haden, Esq. Second edition, &c. by Robley Dunglison, M. D. &c. 8vo. pp. 150. London. 1824.

Medical Report of the Fever Hospital and House of Recovery, Cork St. Dublin, for the Year 1823. By William Stoker, M. D. 8vo. pp. 102. Dublin. 1824.

A Short Treatise on the Section of the Prostate Gland in Lithotomy; with an explanation of a safe and easy method of conducting the Operation on the Principles of Cheselden. Illustrated by Engravings. By C. Aston Key, Surgeon to Guys Hospital, and to the Magdalen. 4to. pp. 34. 4 plates. 1824.

The Surgical Anatomy of the Arteries of the Human Body. By Robert Harrison, A. B. T. C. D. In two vols small 8vo. Vol. I. pp. 226. Dublin and London. 5s. 1824.

A Treatise on the internal use of the Natural and Factitious Waters of Carlsbad, Marienbad, Ems, &c. By Dr F. Kreysig, of Dresden. Translated from the German, by Gordon Thomson, M. D. 8vo. pp. 96. Highley. 1824.

On the Nature and Symptoms of Cataract, and on the Cure of that Disease in its Early Stages, by a mode of Practice calculated to prevent the occurrence of blindness, and to render unnecessary the operations of Couching and Extraction. Illustrated by Cases. By John Stevenson, Esq. 8vo. pp. 234. London. 1824.

A Practical Treatise on Diseases of the Skin, comprehending an Account of such Facts as have been recorded on these subjects, with Original Observations. The whole arranged with a view to illustrate the constitutional causes of these diseases, as well as their local characters. By Samuel Plumbe. London. 1824.

Observations on Vaccination, and on the practice of inoculating for the Small Pox. With an Appendix of Cases and Facts. By John Conolly, M. D. 8vo. pp. 76. Price 3s. London. 1824.

A Course of Lectures on Chemical Science, as delivered at the Surry Institution. By Goldsworthy Gurney. 8vo. pp. 310. 8 plates. 13s. 1824.

The Animal Kingdom, arranged in conformity with its Organization. By the Baron Cuvier, &c. &c. With additional descriptions of all the species hitherto named, of many not before noticed, and other original matter. By Edward Griffith, F. L. S. and others. 8vo. pp. 203. 18 plates. 15s. To be continued quarterly.

An Attempt to explain on natural principles the Cures alledged to be Miraculous, of Miss Lalor and Mrs Stuart. With an Appendix, containing Cases and Illustrations. By a Physician. 8vo. pp. 28. Dublin. 1824.

An Appeal to the Public and to the Legislature, on the necessity of affording dead bodies to the Schools of Anatomy, by Legislative enactment. By William M'Kenzie, Andersonean Professor of Anatomy and Surgery in the University of Glasgow, &c. 8vo. pp. 36. Glasgow. 1824.

An Essay on Cancer. By George Johnston, M. D. 8vo. pp. 58. Edinburgh. 1824.

The New London Dispensatory, containing a translation of the Pharmacopœia Londinensis of 1824. &c. With the modes of preparing, Morphia, Cinchonine, &c. an explanation of Chemical Decompositions arranged according to a new method. With an Appendix, giving an account of Iodine, Hydrocyanic Acid, &c. By Thomas Cox, M. D. 8vo. pp 352. 10s. 6d. 1824.

Evils of Quarantine Laws, and Non Existence of Pestilential Contagion; deduced from the Phenomena of the Plague of the Levant, the Yellow Fever of Spain, and the Cholera Morbus of Asia. By Charles Maclean, M. D. 8vo. pp. 444. 15s. London.

Observations on Fever. By R. Wade. 8vo. pp. 84. London. 1824.

The Economy of the Eyes: Precepts for the Improvement and Preservation of the Sight. &c. &c. By William Kitchiner, M. D. 8vo. pp. 246. London. 1824.

Observations on Injuries of the Spine and Thigh-bone, in two Lectures delivered in the School of Great Windmill Street. The first in vindication of the Author's opinions against the Remarks of Sir Astley Cooper, Bart; the second on the late Mr John Bell's title to certain doctrines now advanced by the same gentleman. With nine plates. By Charles Bell. 4to. pp. 108. London. 1824.

An Elementary System of Physiology. By John Bostock, M. D. F. R. S. &c. &c. Vol. I. pp. 503. London. 1824.

Transactions of the Association of Fellows and Licentiates of King's and Queen's College of Physicians in Ireland. Vol. IV. pp. 452. Dublin. 1824.

Pathological Views of the Structure, Functions and Disorders of the Stomach and Alimentary Organs of the Human Body; with Observations on the qualities and effects of Food and Fermented Liquors, and on the influence of Climate and Local Situation. By Thomas Hare, F. L. S. &c. 8vo. pp. 368. London. 1824.

Original Cases, with Dissections and Observations, illustrating the use of the Stethoscope and Percussion in the diagnosis of Diseases of the Chest; also Commentaries on the same subjects, selected and translated from Avenbrugger, Corvisart, Lænnec and others. By John Forbes, M. D. 8vo. pp. xxxvi. 302. London. 1824.

Principles of Medical Science and Practice. Part I. Physiology. By Hardwicke Shute, M. D. 8vo. pp. 565. London. 1824.

Medical and Surgical Cases; selected during a practice of thirty eight years. By Edward Sutleffe. 8vo. pp. 628. London. 1824.

Strictures on Phrenology, showing that Anatomy, Reason, Common Sense, and Scripture, are not in accordance with Phrenological Principles. By Thomas Rolph, Surgeon, &c. 8vo. pp. 95.

Observations illustrative of the Nature and Treatment of the prevailing Disorders of the Stomach and Liver. By John Thomas Graham, M. D. London. 1824.

Concise Narrative of an Ophthalmia which prevailed in a Detachment of His Majesty's 44th Regiment, on the Voyage to Calcutta, in the Summer of 1822; together with an Account of other Tropical Diseases, and their treatment on board the H. C. Ship Warren Hastings. By Richard Jones. 1824.

Illustrations of the Arteries connected with Aneurisms and Surgical Operations. The plates are intended to explain the relative position of the Arteries, in respect to the surrounding parts, and the Organs to be met with in such operations both externally and internally to their sheaths. Plate I. By G. D. Dermott, M. R. C. S. 5s. In boards 6s. London. 1824.

Anatomical Drawings, from Preparations in the Museum of the Army Medical Department at Chatham. Royal Folio. 9 Plates, with letter press. London. 1824.

A Comparative View of Fever and Inflammatory Complaints, with Essays illustrative of the Seat, Nature, and Origin of Fever. By Thomas Mills, M. D. 8vo. pp. 125. Dublin and London. 1824.

An Introduction to Anatomy and Physiology, for the use of Medical Students and Men of Letters. By Thomas Sandwith, Surgeon. 8vo. pp. 192. London. 1824.

Official Report on the Fever which appeared on board H. M. Ship Baun on the Coast of Africa, and amongst the Detachment of Royal Marines forming the Garrison of the Island of Ascension, in the Year 1823. By William Burnett, M. D. 8vo. pp. 78. London, June 1824.

A View of the Formation, Discipline, and Economy of Armies; with an Appendix, containing Hints for Medical Arrangement in actual War. By Robert Jackson, M. D. A new Edition, much enlarged. 4to. pp. 545. London. 1824.

Elements of Phrenology. By George Combe, President of the Phrenological Society. 12mo. pp. 227. Edinburgh and London. 1824.

Observations on the Nature and Treatment of Fevers and Bowel Complaints which travellers in Greece are exposed to; including Remarks on Climate, Malaria, the safest period of the Year for travelling, and Hints for the Preservation of Health. Intended as a Medical Guide to travellers. By John Somers Down, M. D. 8vo. pp. 76. London.

Appendix to the Formulary for the Preparation and Mode of Employing several new Remedies, &c. &c. By Robley Dunglison, F. R. S. Translated from the French. pp. 48. 1824.

A Historical and Medical Report of the Limmerick Fever, and Lock Hospitals;

comprising a period of near Forty Years; with a comparative view of its variations, at different intervals, from the foundation of the Hospital to the present time. By John Geary, M. D. 8vo. pp. 96. Limerick. 1820.

De Medulla Spinali, nervisque ex ea prodeuntibus, Annotationes Anatomico-physiologicæ. Auctore C. F. Bellingeri. 1823.

Du Froid, et de son application dans les Maladies, Considerations Physiologiques et Therapeutiques; Observations, Corollaires. Par S. Tanchon, M. D. P. Paris. 1824.

Melanges de Chirurgie Etrangére. Par une Socìété de Chirurgiéns de Genève, composee de MM. J. P. Maunoir, C. T. Maunoir, Prof. F. Mayor, C. G. Preschier, J. C. Morin, J. P. Dupin, F. Olivet, Docteurs en Chirurgie. 8vo. pp. 476. Genève. 1824.

Nouveaux Elémens de Chirurgie et de Medècine Opêratoire, ouvrage contenant l'Exposition complète des Maladies Chirurgicales et des Opérations, qu'elles réclament. Par L. G. Begin, M. D. &c. Paris. 8vo. pp. 600.

De Medicis Virtutibus quibus gaudet Croton Tiglium ejusque precipue oleum, Dissertatio inauguralis quam commentibus, &c. &c. 31 Aug. 1823. Una cum annexis Thesibus Eruditorum Examini offerebat Les Vita Fiuzi en Riparolo Provinciæ Mantuanæ. 1823.

Recherches sur les Proprietés Medecinales et l'Emploi en Médecine de l'huile de Croton Tiglium et quelque propositions sur les maladies de l'Jude. These presentée et soutenue a la Faculte de Medécine de Paris, le 2 Fevriūr, 1824. Par W. E. E. Conwell de Londonderry, Docteur en Medecine, etc. Paris. 1824.

De la Moelle Epiniere, et de ses Maladies; ouvrage couronné par la Societè Royale de Medècine de Marseilles, dans la seance publique du Octobre, 1823. Par C. P. Ollivier, d'Angers, D. M. P. 8vo. pp. 413. Paris.

Recherches Chemiques sur les Corps gras d'origine animale. Par M. E. Chevruel. pp. 484. Paris.

Recherches sur le Ramollissement de cerveau: ouvrage dans le quelle ou s'efforce de distinguer les diverses Affections de le Viscere, par des signes characteristiques. Par Leon Rostan Medecin dé l'Hospice de la vieillesse femmes (Salpetrière) Professeur de Medècine Clinique. 2d Edition. pp. 503. Paris.

Observations sur la nature et le traitement de l'Hydropisie. Par M. Portal, Premier Medecin du Roi, etc. etc. Tom I. et II. Paris.

De l'Influence des Agens Physiques sur la vie. Par W. F. Edwards, D. M. 8vo. pp. 655. Paris.

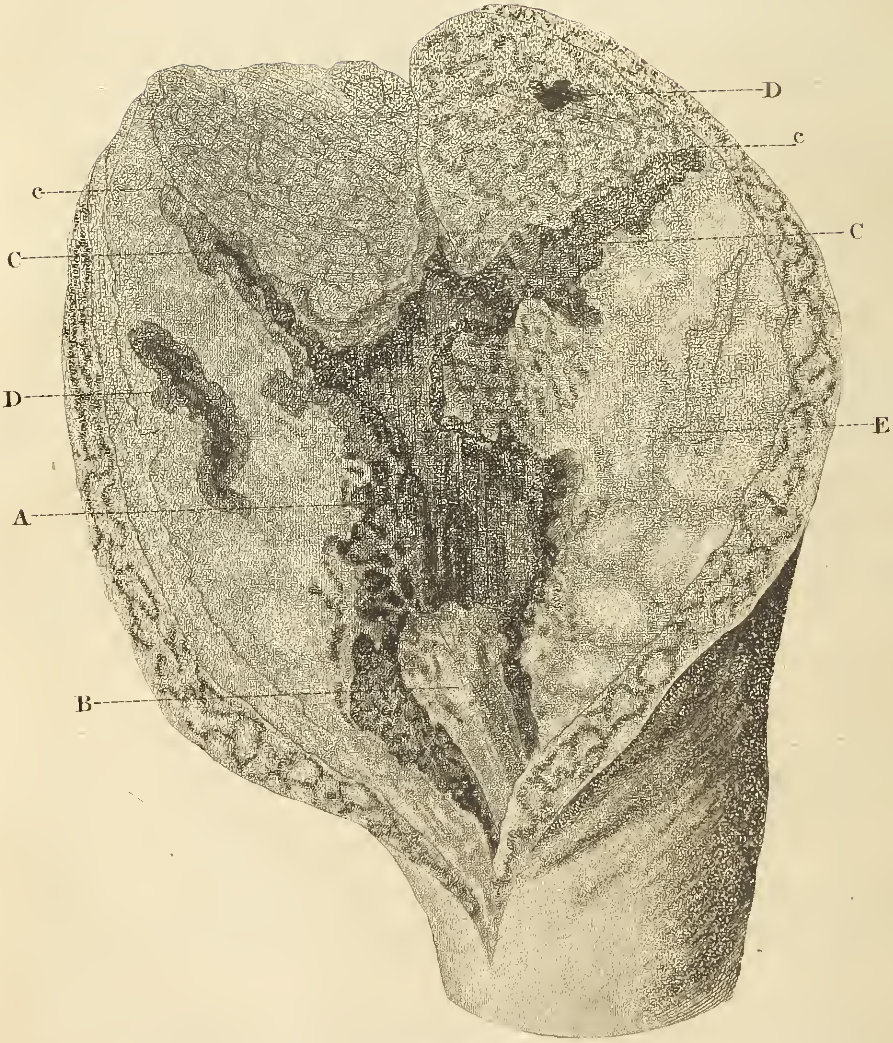
Recueil de Memoires, Consultations, et Rapports, sur divers Objets de Medecine Legale. Par M. F. Chaussier. pp. 519. Paris. 1824.

TO CORRESPONDENTS.

Communications have been received from Drs WEBBER, WOODWARD, PARSONS, HAZELTINE, CHENEY, and CARTWRIGHT, and will appear in the next Number of this Journal.

One of the Editors acknowledges the receipt from Dr DEWEES of a copy of his work upon Midwifery, of which a review is in preparation.

It is requested that communications may be sent at least six weeks before the publication of the Number in which they are intended to appear.



Dissection of the Tumour described page 113.

Published by Wells & Lilly.

THE

New-England Journal

OF

MEDICINE AND SURGERY.

VOL. XIV.] APRIL, 1825. [NO. II.

History of a Tumour involving the Humerus. By Dr Calvin Thomas.

[WITH A PLATE.]

[Communicated for the New-England Journal of Medicine and Surgery.]

THERE is, in some cases of Fungus Hæmatodes and Osteosarcoma, great difficulty in drawing an accurate line of distinction between the two diseases. In the early stage, the symptoms very much resemble each other, and through the whole progress, to fatal termination, where the skin remains entire, the same difficulty of discrimination exists. The following case, we think, will illustrate the truth of the above observation.

Miss Mary F., only surviving child of Cyrus Baldwin, Esq. of Chelmsford, aged 21, on the 27th of March, 1823, while pumping a pitcher of water, fell upon her left shoulder on the ice that surrounded the well. The injury was upon the origin of the deltoid muscle and acromion process. The first impression appeared slight, was soon gotten over by the aid of the common family remedies. The lameness of the shoulder, with increased debility of the arm, gradually made progress; and on the 15th of July, following, she called on me for advice. On examination, I discovered a slight tumefaction near the origin of the deltoid muscle, tender, painful, with a small degree of inflammation. Directed a solution of acetate of lead to be kept upon the part by a moistened compress. 18th. Not having the desired effect, exchanged for solution of muriate ammon. and continued it to the 30th. The swelling being a little reduced, and an abatement of pain, with a view to keep up a more constant excitement, directed the antimonial liniment, which was applied twice a day to the 10th of August. The swelling, at this time, being much abated, the liniment was discontinued, and merc. plaster applied over the surface of the remaining swelling.

On the 30th of August, she had the misfortune to make a mis-step in descending the stairs, fell and dislocated the radius of the diseased arm, at the humeral junction. It caused severe pain in the wrist, as is usual in similar accidents, and also in the shoulder. The morning following, the bone was replaced, the pain soon subsided, the swelling decreased, the arm recovered strength, and on the 16th of September, there was a free motion of it in all directions, without creating pain or uneasiness; and the patient thought herself well enough to discontinue all medical treatment.

Some time after this, she went to Boston, to spend a few weeks with her friends, and with a view of strengthening the limb, which still was much debilitated, took electrical shocks daily, for three or four weeks, without the advice of a physician. The effect was to raise a swelling in the place of the former. After her return, on the eleventh of October, the tumour was found to be double the size it ever had been at any former time, attended with severe pain.

Commenced blistering, and continued that course to the 2d of November, at which time the swelling had increased; the whole tumefaction had assumed a high florid complexion with a considerable enlargement of the cuticular veins. The part had also become very tender and painful. Applied a cold solution of acetate of lead with much apparent benefit. The case proving obstinate, its real character not being yet developed, I requested a consultation, and on the next day, the 5th of November, an eminent practitioner was called and attended the following day. The result was, the introduction of a seton at the base of the tumour, which at this time extended down to the insertion of the deltoid muscle. No other alteration was thought necessary at present; but to continue the use of the lead water, 'till the cuticular inflammation shall have abated, then apply the merc. ointment. On the 3d of December, the inflammation upon the surface had, under the use of the lotion, so much abated, that the merc. ointment was resumed, and applied over the whole surface of the swelling twice a day, to the 16th, when inflammation returned with excruciating pain, mocking the power of anodynes, or any means then using. From the tension of the skin over the tumour, and the fulness of the cuticular vessels, I was induced to extract blood directly from the part by cupping. The relief immediately experienced from this expedient, was so great that leeching and cupping were continued every, or every second day, with nearly the same effect, to the first of January, 1824. The seton discharged very freely, the inflammation abated, the merc. ointment was again applied daily, to the 10th of March. Notwithstanding its long continued use, the system was very little affected by it. Although bleeding abated the pain and inflammation for a considerable time, it did not diminish, or even retard the progress of the swelling, a gradual increase has been going on since her return from Boston, on the 11th of October last, and is now including the arm, 24 inches in circumference, over the most prominent part, while the other, in the same place, is but 13, making a difference of 11 inches increase of the diseased. Upon the prominent part of the swelling, were three considerable protuberances, the largest of which, the circumference of a dollar, was elevated about three-eighths of an inch above the surface, conveying, on pressure, an obscure sensation of fluctuation, and having a brighter florid colour than the other parts of the tumour. Several large varices spread over the surface, exhibiting, as the tumour increased, a very singular appearance; instead of maintaining their prominence, sunk below the surface, leaving small serpentine canals, dark coloured, probably from long confinement, or a slow movement of venous blood. After the first seton had worn out, a second and third were, in succession introduced. When the last of these had closed for a short time, an anasarca serosa took place over the whole limb; beginning at the wrist and extending above the upper part of the disease at the shoulder. The skin became very thin and shining, especially, on the protuberances before mentioned, and we were in daily expectation of its rupturing; but an event took place, which was, probably the cause of its remaining entire ever after. The place of the last introduced seaton, which had been closed about ten days, burst and discharged copiously, a serous fluid, reducing the tension of the skin over the whole tumour, and continued to discharge the same kind of fluid, while she lived. About the middle of March, a representation of the case was made to a gentleman in Boston, of high respectability in the surgical department. He was clearly of opinion, that the disease was incurable, as there was not now, nor ever had been a time, after the disease became serious, when amputation could have taken place with the least prospect of success, had the patient consented, which was not the case. He recommended a palliative course, which for a time, had a good effect. At length, the system began to sympathize deeply, with the local disease. Every medicine failed of producing its former effect. Loss of appetite, emaciation, pain, and prostration of strength succeeded, and under the accumulated load, she expired on the 18th day of June. A short time previous to death, the tumour measured round the largest part, 33 inches.

A medical gentleman at the examination was desired to take minutes of the appearances, who has kindly furnished the following report:—" Thirty-eight hours after death, an examination of this interesting case took place in the presence of the neighbouring gentlemen of the Faculty. The arm was first amputated above the articulation of the shoulder by dividing the clavicle and scapula. On the exterior surface of this latter bone, was observed some portion of a dark coloured pulpy mass, excepting which, the amputation seemed to have removed the whole disease. The external surface of the tumour was of irregular form, had of late lost its variegated hue, and was paler. An incision was next made longitudinally of the arm, and penetrating until the internal structure of the whole was fully displayed, and exhibited the following appearances. The outer covering was the common integuments, rather thin, and with little cellular substance; next to which, and without a distinct sac, was the tumour itself. It was composed of a substance of almost cartilaginous consistence, differing from it, however, in being whiter, interspersed with small cells of coagulated blood, and having so little tenacity, that the finger might easily be forced through it in any part. The aggregate was made up of a collection of small cells of various forms, filled with this substance, in the larger of which, a distinct fibrous appearance was visible. The os humeri, for an extent of at least, five inches, was destroyed, and in its situation, a cavity formed and filled with a fluid of a pale yellow colour, and of about the consistence of whey. This cavity was lined with coagulated blood, of irregular shape, extending in one direction to within one half of an inch of the integuments. It may be here observed, that the elevations on the exterior did not seem to denote any tendency of the fluid toward the surface, but only an increased thickness of the diseased mass. Spiculae of bone were found in the neighbourhood of the cavity, appearing more like portions of the os humeri, not yet wholly changed, than new depositions of bony matter. The texture of the remaining extremities of the bone, which are preserved, did not appear diseased; the head of the os humeri was in its proper situation, and the cartilages and capsule of the joint were but little altered. No trace of muscular substance was discoverable in any part of the tumour."

As matter of curious, rather than useful record, the following weights are subjoined:—

Weight of the arm, as amputated at the shoulder,	24 lbs.
Weight of the contained fluid, - - - - - - - -	3¼
Total weight of disease, (fore-arm being removed,)	21

Tyngsboro', *Feb.* 14th, 1825.

By a reference to the accompanying drawing, furnished by Mr Geo. R. Baldwin, a very accurate idea of the above described appearancs may be easily obtained:—

A represents the large cavity, occupying the former situation of the os humeri, filled with the fluid above named, and showing its extent and relative situation.
B The lower extremity of the os humeri enlarged, and projecting into this cavity.
C C An irregular extension of the cavity toward the surface, showing its nearest approach at *c c*.
D Smaller cavities filled with coagulated blood.
E Amidst these larger cells of the tumour, we observe more distinctly, the radiated fibrous appearance.

Observations on Ischuria Vesicalis; with Concise Notices of Three Cases, illustrative of the Necessity and Utility of the Catheter in that Disease; and on the Operation of introducing that Instrument. By Richard Hazeltine.

[Communicated for the New-England Journal of Medicine and Surgery.]

THE death of a respectable physician,* from Ischuria vesicalis in the county of Essex, on the 31st of August, 1823, determined me at that time to communicate some observations on that disease; but a case of the disease occurring soon after in my own practice, which required very particular attention for a few months, and continued under my care even into the year 1824; induced me to suspend, at least for a while, the execution of my intention. If what follows should be deemed worthy of a place in the New-England Journal of Medicine and Surgery; it is respectfully submitted to the service of the editors of that excellent repository.

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* Dr John Dury of Marblehead.

It is not intended to introduce into this communication a great *variety* of cases of Ischuria vesicalis; as it is believed a brief detail of the circumstances of a few, exhibiting a considerable *diversity*, however, in the character of the disease, will be sufficient to illustrate the principal object in view on the present occasion.

CASE I.

In the month of November, in the year 1816, J. P. of Lebanon, in the county of York, and State of Maine, near 70 years of age; after riding on horseback ten or a dozen miles on a raw cold day, by which he was very much chilled; and imprudently retaining his urine, was seized in the evening, after returning homewards, about three miles, with a total suppression of it; attended with involuntary, and occasionally severe, efforts to expel it. I was called to him immediately; but was not able to visit him till near midnight. My practice was as follows; exclusive of what the nurse was directed to do, with a view to his relief.

November 21, 1816, near midnight.—Two portions of pulv. opii. Ipecac. Camphor, and Calomel; and two pills of Ext. Con. mac. and a cataplasm of onion to the hypogastric region.

22. Venesection; and a large emollient enema, intended to act as an internal fotus to the pelvic viscera; 1 pill op. of 1 gr.—L. L. with Camphor, and 5 doses of Tinct. Fer. muriat.

23. One calomel pill; ol. Ricini; and Sen. Man. Sulph. Sod and Sem. Cor. pro Infus. for a cathartic.

24. Introduced the catheter this A.M. with great ease, and drew off two pints of urine.

25. Catheter and L. L. in the A. M. And the catheter again in the evening.

26, 27, 28, & 29; Catheter once each day.

By this time my patient was so comfortable, that he proposed to wrap up warm and ride home on horseback; and with my permission, take the instrument with him in order that he might introduce it himself, which he thought he could do, if there should be need, which there was even yet; for he could not expel one drop of urine by voluntary efforts. His proposal was assented to; and after using the catheter himself, with great ease, about 10 days, once or twice a day, the instrument became altogether unnecessary; and he was perfectly well.

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* See a note respecting this article under Case II.

CASE II.

May 23, 1820, I was called to visit J. Bailey, aged nearly 70. He was a tall, spare person, of a lax fibre, and loose cellular texture. He was from Hanover, in the county of Plymouth, and was now on a visit at Lynn. He was labouring under Ischuria vesicalis of two or three days' standing; attended with so much distress, that had it not been for a little relief obtained by his own frequent, but unsuccessful attempts to introduce the catheter, by the mere mechanical impression of which, however, he was sometimes able to procure a small evacuation, his situation would have been intolerable. This was a very interesting case. The old gentleman was of the society of Friends, and one of their ministers, and of a most excellent character and disposition; and it seems had been formerly subject to the disease under which he now laboured. He had suffered several attacks of it in different parts of the United States, when on his ministerial excursions; and had been obliged, more than once, on such occasions, to solicit medical aid. He was an ingenious mechanic in metal work, and had provided himself with a catheter of his own fabrication, which he always carried with him on his journeys; and had more than once relieved himself by the use of it, and that too, when the physician, whom he had consulted, could not introduce it. On the present occasion, he had repeatedly attempted to introduce the catheter for himself, but altogether without success; except that sometimes the mechanical impression of the instrument on the parts concerned, was such as to produce a small evacuation of urine, between the external surface of the catheter, and the parietes of the urethra; which would always afford him some little relief. He had made such violent and unapt attempts to introduce the catheter, that he had lacerated the urethra, and produced considerable effusion of blood; and thereby rendered it impossible for me to succeed in my first efforts.*

I found the old gentleman labouring under much distress, with a hard, full pulse, attended with repeated, severe, involuntary, and ineffectual throes to expel his urine, succeeded with alternate intervals of comparative ease.

I shall not give a very particular detail of the circumstances of this case; but state merely what relates to the use of the catheter, and the medical treatment from day to day.

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* "Unsuccessful attempts may render a case extremely difficult; which was not so before. I wish to impress upon the mind of my reader, that a moderate force, improperly directed, is capable of injuring the urethra in such a manner, as to render the operation almost (and without a just knowledge of the injury, altogether) impracticable."—Hey.

May 23, 1820. In the A. M. blood-letting; two pills of opium of one grain each; Tinctura Ferri muriati,* and an unsuccessful attempt to introduce the catheter. In the evening; blood-letting again; a large portion of Sen. Man. Sul. Sod. and Sem. Coriand. pro infus. for a cathartic; tinct. Digitalis, and another unsuccessful attempt to introduce the catheter.

24. Failing again this A. M. in an attempt to introduce the catheter, and my patient being in no respect relieved; I proposed to him to send for his family physician, Dr Dwelly of Hanover, who had several times and with success, attended him under similar circumstances. In the meantime I turned all my attention to the operation of introducing the catheter; an operation in attempting to perform which, I had never before failed. In the afternoon I succeeded perfectly well, and drew off at least three pints of urine: and I introduced the instrument successfully five times in the course of the remainder of the afternoon and evening.—Spir. Nit. Eth.—2 pil. Op. and the tepid bath.

25. Dr Dwelly arrived late last evening; and tarried to-day till towards noon. He introduced the catheter once after his arrival, and again before he went. I introduced it once in the course of the day afterwards. This day I put my patient upon a liberal use of a solution of the carbonate of potash. The spiritus etheris nitrosi was begun with yesterday.

26. Catheter twice;—morning and evening; and one calomel pill to-day.

27. Catheter twice;—morning and evening.

28. Catheter once;—in the morning. To-day he was afflicted with hæmorrhoids; a complaint to which he was somewhat subject. He had sulphur and cremor tartar; and Ung. Nuc. gal. Catheter again in the evening.

29. Catheter thrice;—morning, noon, and evening. Tinct. Digitalis purp. and supercarb. potass, pro solut.

30. Catheter twice;—A. M. and P. M. Supercarb. pot. pro solut.

31. and June 2. Catheter once each day.—3. Catheter thrice.

4. Catheter thrice and one calomel pill.—5. Catheter thrice, and L. L.

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* From the statement given in Thomas's "Practice of Physic," the first [Miller's] American edition, page 525, respecting the efficacy of the Tinc. Ferri muriati in Ischuria, a faithful trial of it in this and the former cases was made; but without any good effect. Whether the circumstances of the two cases were such as to justify its use, I will not pretend to say.

6. Catheter thrice; and Tinct. Digitalis.—7. Catheter thrice.

8. I was called to him at 2 o'clock last night; from which time to 3 o'clock this P. M. I introduced the catheter five times. Spir. N. Eth.

9. Friday.—I introduced the catheter at 6, and at 10 o'clock last evening after the preceding record; and three times in the course of the night and before 7 o'clock this morning; tarrying with him all night. Catheter twice to-day before 8 o'clock in the evening; 2 enemas, and decoction of Cort. Ulm. for drink.

11. Sunday.—I tarried with him from Friday evening after the last record till this morning, i. e. two whole nights and one day; and introduced the catheter once in about three fourths of an hour or every hour, during all that time;* and administered several enemas; and gave him four small doses of Ipecac. and Calomel. To-day catheter once; and L. L.

June 12, 1820. Catheter twice;—A. M. and P. M.; and 2 pills of Ext. Con. mac.

13. Catheter once;—in the morning. Supercarb. potass, pro solut. and V. A.

14. Catheter once;—in the morning. Sup. carb. pot., L. L. and Cort. Ulm.

15. Supercarbonate of potass, pro solut. This article, or the subcarbonate of potass, in solution, had now been taken freely for several days, but without any evident beneficial effect. The object of its exhibition was, to diminish the acrimony of the urine, and take off irritability.†—16. L. L.—17. Twenty-four pills of opium of one grain each.

23. L. L. 1 oz., and 36 pills of opium of one grain each. [Sixteen of these pills were not taken.]

July 3.—Spir. N. Eth. [This article had been taken freely for several days; but without any sensible effect.] Carbonate of Magnesia, and Ung. Hyd. sine Terebinth. for the hemorrhoids. From the 15th of June, to the 5th of July inclusive; a period occurred in which the catheter was not necessary. And to what cause this suspension of the disease was to be attributed, I cannot explain. That it was not owing to the opium, I think is evident; because it failed to produce any permanent good effect at other times; and notwithstanding its use, it became necessary to have recourse to the catheter again as follows:

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* In an extract of a letter from one of Mr. Hey's correspondents, relating to a case in which the former had been consulted, it is stated, "The irritation is so great as to require the water to be drawn off every two hours." "Practical Observations," &c. Phil. edit. 1805, page 250.

† See a communication in "Transactions of a Society for the improvement of Medical and Chirurgical Knowledge," &c. by G. Blane, M.D. &c. "On the effect of the pure fixed Alkalis, and limewater in several Complaints." Vol. II. page 132.

July 6. Catheter four times.

7. After the last record, i. e. at 9 o'clock last evening, catheter once; after which I tarried all night with him, and introduced the catheter every hour and half, till 6 o'clock this morning.

8. The catheter was introduced once in about two hours all day yesterday; and as often all last night, till half past six this morning, and five times in the course of the day afterwards.

9. I tarried all night with him and introduced the catheter five times; and seven times afterwards in the course of the day. Tinct. Dig.

10. I tarried all night with him and introduced the catheter four times; and seven times during the day and evening.

11. I tarried all night with him and introduced the catheter five times; and seven times in the course of the day and evening afterwards.

12. I tarried all night with him, and introduced the catheter seven times after 10 o'clock last evening; and once only to-day.

13. Catheter once;—14. I was called to him last night, just after midnight; and introduced the catheter after that time, and in the course of this day, ten times.—15 & 16. Catheter twice each day.

17. Catheter twice; and one calomel pill.—18. Catheter twice.

19, 20, 21, & 22. Catheter once each day.

After this period, this old gentleman required no further use of the catheter, nor my attendance any longer. He tarried in town, however, a month or six weeks; and I occasionally called to see him; he being at his son-in-law's, Mr Daniel Newhall's, who, with Mrs Newhall, could give ample testimony to the correctness of every thing herein stated with regard to this case, if it were necessary. He at length returned to Hanover, where he continued and enjoyed his usual health, and journeyed occasionally as he had formerly done, till his last sickness and death, in the winter of 1823. His daughter, Mrs Newhall, informed me that his last sickness partook nothing of the nature of Ischuria.

The irritability of the bladder in this case, was such some part of the time, that one ounce of urine would excite violent, distressing, and expulsive efforts, till it was drawn off by the catheter. Large doses of opium, to be sure, would suspend those efforts for a while; but they would most certainly recur, and with increasing severity, till the catheter was again employed. But opium gave occasion for the use of purgatives and enemas; the operation of which kept up the irritation, and in the end, did more harm than the opium did good. Mild enemas with laudanum were frequently administered; but with only temporary good effect. Other enemas were occasionally employed to keep the bowels open; but any further than that, they were of no use, except that they answered that purpose; giving less irritation than purgatives. Hemorrhoids were undoubtedly an aggravating circumstance, and rendered the management of the case more difficult. The digitalis produced its own peculiar effects, such as vertigo, nausea, and prostration of strength, &c., but did not in the least appear to affect the diseased parts. The objects in view, in the use of this medicine, were two; 1st, a more copious, dilute, and consequently less acrimonious urine; and 2d, to diminish irritability.

In all my use of the catheter in this case, I could make no discovery of calculus; nor had I any reason to believe from my patient's history of his case, nor from an examination per anum, with the finger, to ascertain the fact, that the prostate gland was diseased.

After drawing off his urine, even if the quantity were not more than one or two spoonfuls, (and it was frequently necessary to introduce the catheter, when no more than that quantity was obtained,) the patient would become tolerably easy for awhile, longer or shorter; at length painful efforts for expulsion would again recur and increase in severity and duration, till the catheter was again introduced; after which for awhile he would enjoy some little respite. It seemed to be necessary, absolutely necessary, to introduce the catheter as often as the throes recurred, if it were as often as every half hour; and as the diseased action abated, the intervals between the throes became longer and longer, till at length the latter ceased altogether.

At one time when it became necessary to introduce the catheter so often, an attempt was made to introduce and retain an elastic gum catheter; but it was found it could not be kept in the urethra. It seemed to excite the same expulsive efforts that the urine did; and was speedily dislodged.* Whether the silver catheter could have been better retained or not, I do not know; as a trial was not made. Besides; it was confidently believed that the natural action of the parts would be sooner restored by withdrawing the catheter every time it was introduced, than by retaining it in the urethra.

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* Mr Hey says, "I have seen some patients who could not bear the catheter to remain in the urethra without great uneasiness."—Practical Observations, &c. page 251.

My patient had become, from former experience, so fully persuaded of the inutility of every thing attempted for his relief in this distressing disease, except the occasional introduction of the catheter, that his mind now seemed to be opposed to every thing else that could be proposed. For this reason I was deterred from the trial of several other expedients which occurred to my mind. I should have repeated the tepid bath; but for the extreme inconvenience of the operation under certain circumstances. I should have taken more blood; but he had conceived a prejudice against that evacuation in a person of his age.

There was something remarkable in the pulse of my patient during the whole of his sickness. The right radial artery was uniformly full and tense, and most clearly indicated further blood-letting; while that of the left arm was as constantly small and feeble. This disparity of action in the radial arteries disappeared as the disease went off.

It is not to be doubted that if this old gentleman had been in a situation remote from a physician, or some one who could use the catheter for him as often as it was necessary, he must have died. I have known several instances of this disease terminating fatally in elderly men, in the country under the care of different practitioners, since my commencement of the study of medicine in the year 1789, when the patients could not be properly attended to, or when it was not known that a frequent use of the catheter in such cases, is indispensably necessary for the preservation of life; and that without it every thing else is of comparatively no avail.

During the whole of this distressing scene, my patient possessed great composure and firmness of mind; and exemplified the excellence of the religion he professed, by the most astonishing patience, and the most unwavering submission to the will of God. His mind seemed to be exalted above the ordinary standard of human intellect; indeed almost above complaining; there was not a murmur, nor one expression of impatience heard during the whole of his painful confinement.

In contemplating on the circumstances of such a scene of distress, let the young practitioner consider what must be the satisfaction enjoyed by the attending physician, to reflect that although he is unable at once, to cure his patient, he may, by his fidelity, assiduity, and perseverance in the use of the best means he is acquainted with, and perhaps the best which the nature of the case admits of, not only afford him some essential relief, but in the end prove the instrument, in the hand of Providence, of preserving his life.

CASE III.

On the 21st of September 1823, J. B. of Marblehead, came to my house to consult me on account of a morbid retention of urine, under which he had laboured for sometime past. He was 30 years of age; had commonly enjoyed good health; but had occasionally suffered from his present complaint for at least 16 years. The retention was not total, but he was able to discharge only a very little urine at a time; say not more than a spoonful or two, by voluntary efforts, and that not oftener than a few times in twenty-four hours; enough, probably, however, to prevent any alarming or dangerous consequences. He experienced no acute distress; and for the most part continued to do business of a kind which required him to be moving about in a horse-cart. The hypogastric region was considerably tumefied, and was tender upon compression; and the bladder was evidently distended with an accumulation of urine. His pulse was natural; and his appetite for food was tolerably good, but his tongue was coated. From his own account, his business had rendered it inconvenient for him to urinate so frequently and promptly, as in fact he had occasion to do; and by this practice of voluntary retention, his bladder had in a great measure, lost its contractibility.

Considering this to be clearly a case in which almost the sole object of the physician was to restore the contractile power of the bladder; and that the catheter undoubtedly was the principal means to which to resort for that purpose, I treated him as follows; viz.

September 21, 1823. I made an unsuccessful attempt to introduce the catheter, but the mechanical impression of the instrument on the parts concerned, was such as to produce a discharge of two or three ounces of urine, *extra tubum catheteris;* by which he was so much relieved, that he experienced more ease for 24 hours subsequently, than he had enjoyed for several days before.

22. He came again, and I drew off, after introducing the catheter with great ease, nearly three pints of urine, of a natural colour. I gave him 1 oz. of Tincture of Cantharides, to be taken three times a day, in increasing doses, beginning with six drops. I also gave him a piece of sponge, with which to sponge his lumbar region with cold water, morning and evening.

23. So little uneasiness, that the use of the catheter was omitted, especially as he had passed some urine, as he had done all along, by voluntary efforts. Gave him an active cathartic of Jalap, Calomel, Nitre and Gamboge, to be taken tomorrow morning.

25. He came again: Had passed a little urine, as before, *nixibus voluntariis;* but there was evidently a tumefaction of the hypogastric region, and I introduced the catheter with great ease, and drew off about a pint of urine.

Considering the use of the catheter so important in this case, my patient, consequent to my advice, took up his residence in my neighbourhood in order that he might conveniently call on me and have the instrument introduced twice or thrice a day, if deemed expedient.

26. The catheter was introduced morning and evening.

27. Catheter morning and evening; and Tinct. Canth. 1 oz.

28. Catheter once;—cathartic pills with calomel for a cathartic.

29. Catheter twice;—and Tinct. Canth. ½ oz.

30. Catheter thrice;—morning, noon, and evening; Tinct. Canth. 1½ oz.

October 1. Catheter twice.

2. Catheter thrice;—and pills, &c. as on the 28th.

3. Catheter thrice;—and Tinct. Canth. 2 oz.

4. Catheter twice.

By this time he found himself so much better, and the quantity of urine drawn off at each time of introducing the catheter, was so small, that he returned home with an intention to call on me twice or thrice a week, as occasion might require.

6. Catheter once;—Tinct. Canth. 3 oz.

11. Catheter once;—and Tinct. Canth. 3 oz.

14. Catheter once;—and Tinct. Canth. 2 oz.

18. Catheter once;—21. Catheter once; and Tinct. Canth. 2½ oz.

25. Catheter once.

November 1. Catheter once;—and Tinct. Canth. 2 oz.

4 & 8. Catheter once each day.

11. Catheter once;—and Tinct. Canth. 3 oz.

15, 18, & 22. Catheter once each day.

From the 6th of October to the 22d of November, although he could, by voluntary efforts, expel most of his urine; yet a little would remain every time he attempted to urinate; and the quantity would be greater or smaller, according to the time that was suffered to elapse between one introduction of the instrument and another.

December 2. Catheter once.

6. Catheter once;—and Tinct. Canth. 2 oz.

9 & 18. Catheter once each day.

1824, January 23. Catheter once.

April 20. Tincture of Cantharides, 2½ oz.

August. I have seen this man once or twice every week since the last record, and he has constantly told me that he has no trouble from an accumulation of his urine; and of course there has been no occasion for the use of the catheter since the 23d of last January: that whenever he feels any sensation as if there might be a beginning accumulation, he takes a dose or two of the Tinct. Canth., and always with the desired effect. And it may be easily conceived how little occasion he has had for this medicine, when it is recollected that he had 2½ oz. on the 20th of last April, and none since.

December 1824. I see this man almost every week, and he constantly tells me he continues to be perfectly well; and has had no occasion to take any of the Tinct. Canth. for a long time.

There is something remarkable respecting the use of the Tincture of Cantharides in this case; and that is that he began with a small dose three times a day, as already stated, which he continued to increase till he took a teaspoonful or more at a time, before it produced any of its peculiar effects on the urinary passages; that in such large doses it did at length produce these peculiar effects, and occasioned most severe distress from the kidneys to the glans penis; and he was obliged to diminish the dose, and even intermit the medicine altogether for several days, and he was using one and the same preparation of the medicine all the time.

Another remark is to be made on the effects of the Tincture of Cantharides in this case, as I go along; and that is, that even for a while after the medicine produced those severe strangurious effects, the patient could not entirely empty his bladder; so but that upon introducing the catheter immediately after he had expelled his water, all that he could, I could draw off an ounce or two more; but the instrument and the medicine did at length attain complete dominion over this stubborn organ, and produce a perfect cure.

An epispastic to the sacro-iliac region would without doubt, have accelerated the cure, but it would have prevented my patient from pursuing his business; and was therefore omitted.

In chronic cases of this disease, may not the coats of the bladder become so thickened as to require a more liberal use of mercury than was employed in this case?

For a few times after the first of introducing the catheter in this case, I drew off from four to eight ounces of urine, even immediately after the patient had expelled all he could; but the quantity retained, continued to diminish till it was at length ascertained that the bladder had perfectly recovered its contractile power.

I never before knew a case of Ischuria vesicalis attended with so little distress as was experienced in this case, where there was evidently such an accumulation of urine. There was, indeed, as has already been remarked, not a total suppression; perhaps enough was passed daily to prevent serious consequences.

Considering that the proximate cause of the disease in the cases above related was so different, it is remarkable that the catheter was so necessary and useful in all of them.

Morbid irritability of the bladder, and a want of reverse sympathetic action between that viscus and the other parts concerned in the expulsion of urine, seemed to be the proximate cause of the disease in cases, number I. and II. In case III., mere torpor or inirritability of the bladder was the proximate cause of the disease; and this viscus made little or no expulsive efforts, although it was constantly distended with urine. In the two former cases, the efforts for expulsion were frequent, powerful, and distressing; but particularly so in case II., and that even when very little urine was contained in the bladder.

In order to the due expulsion of the urine, it is not only necessary that the bladder should contract, but that the sphincter vesicæ, the urethra, muscles and membranes concerned in that function, should yield, give way, relax. In cases, number I. and II., although the bladder contracted in a manner sufficiently powerful to expel its contents, the parts below, probably contracted also, instead of yielding, relaxing, giving way. In this we have an instance of dissociate action, somewhat similar to what frequently occurs in common life between two men of very contrary and unaccommodating dispositions; the one will; the other will not. In such a case nothing can be effected without much difficulty; but where both are agreed as to the attainment of any object, the accomplishment of it is very easy. We have several examples of similar action, both healthy and morbid, in the hollow muscles, but I need not specify them.

The best external application in these cases, and one which together with a few general remedies, I have commonly found successful without the catheter, is a large cataplasm of onion, shred fine, and fried in a little hogs-fat, or oil of some kind, and put into a bag and applied to the hypogastric region. And I was much gratified the first time I read John Bell on the operation of introducing the catheter, who, by the by, gives excellent directions on that subject, to find, that the application of onion in this manner was a medicament not beneath his notice and approbation; although I had been acquainted with its efficacy long before I read his book. At the time I was writing this communication, I was called by one of my medical brethren to see one of his patients labouring under Ischuria vesicalis of more than twenty-four hours' standing. I introduced the catheter with great ease, and drew off about a pint of urine. The onion cataplasm was then applied, and a powerful opiate administered, and he had no further occasion for the catheter. The disease in this instance seemed to be owing to sympathy from some irritation in the rectum, from hemorrhoids, or from the operation of cathartics; for he had been repeatedly bled and purged before I was called, for some external injury which he had recently received.

Cases of Ischuria vesicalis, if they cannot be cured by the ordinary means of removing inflammation, spasm, &c. or if they occur in persons who live remote from a medical man, or some one who can successfully introduce the catheter; especially if they occur in aged persons, generally terminate fatally; at least this has been the issue in most cases that have come to my knowledge from observation or information.

I have not derived so much information respecting the nature and treatment of Ischuria vesicalis from any book which I have read, or from any practitioner with whom I have conversed on the subject, as from a work, entitled, "Practical Observations in Surgery, illustrated with Cases and Plates; by William Hey, Esq." &c.: a work that was recommended to me nearly twenty years ago by the late lamented Dr Warren of Boston; a gentleman not more distinguished by his great professional talents, than by his private virtues, and a most engaging affability. Mr Hey, besides giving some of the best directions for introducing the catheter that I have ever met with, seems clearly to have established the following facts, viz.

1. "A retention of urine in the bladder, when the natural efforts are incapable of affording relief, is, in male subjects, a disease of great urgency and danger."

2. "Persons advanced in years are more subject to this complaint," [requiring the use of the catheter,] "than those who are young or middle aged."

3. "A retention of urine," requiring the use of the catheter,

"is an inability, whether total or partial, of expelling, by the natural efforts, the urine contained in the bladder."

4. That "this complaint may subsist when the flow of urine from the bladder is by no means totally suppressed;" nay, "the patient" may "make water with a stream, and discharge a quantity equal to that which is commonly discharged by a person in health"; and yet so much may be retained as to prove fatal without the use of the catheter.

5. That in this complaint, "violent efforts to make water are often excited at intervals, and during these strainings, small quantities of urine are expelled; and that under these circumstances, the disorder may be mistaken for the strangury."

6. & last. "That a person regains the power of expelling his urine much sooner when the catheter is" seasonably, and frequently introduced, and "is withdrawn after each operation, than" when its introduction is delayed or omitted, or "when the instrument is left in the urethra."

I shall now conclude this paper with some observations on the operation of introducing the catheter.

I have successfully introduced the catheter in several cases of Ischuria vesicalis, beside those above stated; but even if I had not, I flatter myself the frequency, and success of its introduction in those cases, will justify me in making some remarks respecting the operation, without incurring the charge of vanity or of presumption; I may be allowed, at least, to relate my own manner of proceeding, and make such remarks as are drawn from my own experience.

The surgeon who attempts to introduce the catheter, ought to adopt, and be greatly influenced by the motto with which an excellent writer on midwifery more than forty years ago, prefaced his volume; viz. "ARTE NON VI;" for nothing can be more applicable as a rule. If the surgeon do not possess a sufficiency of the ARS to enable him to introduce the instrument, he may be assured he will never succeed with the mere VIS, except at the risk of his patient's life. Force will by no means supply the place of skill; but skill will succeed with very little force.

I know not with what facility other persons succeed in this operation, having never seen more than three attempt it; and they were not remarkably successful; one did not succeed at all; and one of the others did not till after several unsuccessful efforts, and much effusion of blood; so that my manner of operating is almost wholly derived from reading, reflection, and my own practice, not from the example of others. I proceed as follows:

If the weather be cool, I endeavour to have my patient in a warm room, and as little exposed to the cold as possible. For the same reason, I have a large bowl of warm water provided, with which to warm my hands, and the instrument. I place my patient on the foot or side of the bed on his back, with his head and shoulders elevated by means of pillows; with his feet resting on the floor, or on a stool, chair, or cricket; and myself standing between his lower extremities. But I do more frequently place myself at the left side of my patient's bed, while he lies in the usual manner, parallel with the same on his back, with his head and shoulders raised. I now take the instrument by the ears between the thumb and forefinger of my *right hand*, and hold it in such a manner as to be able commodiously to oil the whole of the external surface with the thumb and forefinger of my *left hand*, frequently immersed in oil, which I also endeavour to introduce into the perforations at the beak end, in order that it may pass downward into the curve of the instrument inside. Then holding the catheter still by the ears, but now between the thumb and *middle* finger of my right hand, with the forefinger opposed to the extremity of the tube in such a manner as to retain the oil contained in its cavity till the instrument shall have entered the membranous part of the urethra, and the bladder, if possible; with the beak turned downward, and my hand resting gently on the abdomen of the patient, or held very near it, I take the penis between the thumb and forefinger of my left hand,* and insinuate the point of the instrument into the urethra, and move it moderately and steadily downward toward the arch of the pubes, at the same time extending the penis on the instrument, and gently raising my right hand from the abdomen of the patient to an angle of about 45 degrees; and when I have arrived at the arch, or a little further, (which fact I ascertain by letting go the penis, and applying my fingers to the perineum, or by pulling the instrument a little in a manner directly contrary to the motion that has thus far been given to it, in order to discover whether the point of it will hook against the arch, and if it does, I remove my forefinger from the extremity of the tube, that the oil may effuse into the urethra, and at the same instant, supporting the instrument against the arch with the fingers of my left hand,) I bring the handle end of the instrument over with a circular sweep towards the patient's thighs, gently moving the point of the instrument onward at the same time, as if aiming to keep it in contact with the inside of the pubes, or nearly so, till it enters the bladder, which will be immediately perceived by an issue of urine. When arrived at the arch of the pubes, if it be found by the efforts already directed, that the instrument does not hook, it must be borne onward a little further, with force applied and adapted to the purpose; for the circular sweep ought not to be completed till it is ascertained that the point of the instrument has passed under the pubes.

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* John Bell directs to hold the penis between the index and middle finger of the left hand.

In all these manœuvres, the hands, the penis, and the instrument, must be held and governed by a regard to a direct line; that is, the instrument must be held in a direct line, on or near the abdomen of the patient when its point is introduced into the urethra; the penis must be held in a direct line, (not perperdicularly to be sure, but in a position accommodated to the beak end and curve of the instrument,) up over the pubis; and when the instrument is raised, and made to take the circular sweep before named, a direct line must be observed and regarded, till the point enters the bladder. In speaking of a direct line, I mean an imaginary line, corresponding with the *linea alba abdominis*. But this rule respecting the observance of a direct line is not without exceptions; for, exclusive of a very strict regard to the natural situation of the urethra, it must be admitted that any direction which the catheter takes in this operation with *remarkable facility*—spontaneously as it were—is to be observed and followed, even if the instrument thereby diverge a little out of a direct line.

Now if in any part of the operation, the surgeon is baffled, and cannot proceed without much force, he must correct his erroneous procedure by a strict regard still to the anatomical situation of the urethra; for he must constantly bear in mind that his failure is most probably owing to his not following exactly the natural course of that passage with the point of his instrument. He must now pause a few seconds, and consider whether he has fairly and easily carried the point of his instrument to the arch of the pubes; for so far he may expect to proceed with comparatively great ease, or may confidently calculate on disappointment: he must consider whether he has passed the point of the instrument under and a little within the arch of the pubes; which he will ascertain by an effort made in the manner already suggested: he must consider also, whether he holds the handle extremity of the instrument in a direct line, or whether he does not bear it over one or the other groin, or whether in his attempts to move the instrument onwards into the bladder, he does not bear the point towards one side or the other : or lastly ; whether, instead of supporting the point of the instrument, and moving it onward in the manner already described, he does not make it bear against the lower and posterior surface of the membranous portion of the urethra, by which it becomes entangled in the folds of the membrane, which writers say are easily formed ; or against the prostate gland, through the anterior portion of which the urethra passes : or he may retract the instrument a little, in order to bring the point again directly under the arch of the pubes, and then gently move it onward with a *more particular aim* to keep it as it were in contact with the inside of the arch. But it is my opinion, and one in which I am somewhat confident, having first formed it from the suggestion of another person, and at length confirmed it by my own experience, that if the surgeon have failed in a fair attempt to introduce the catheter, especially if he have already proceeded as far as within the arch of the pubes or near to the prostate gland, instead of allowing himself to make many vague, unsuccessful, and perhaps, ill-directed efforts, he had better wholly withdraw the instrument ; and after due preparation to obviate the difficulties, whatever he may suspect them to be, and oiling it, make another attempt. Such a step will maintain the appearance of more decision, and of more confidence in his own ingenuity, ability, resources and ultimate success, and will inspire his patient with more hope, and with greater confidence, and patience, than a contrary course would do. The surgeon should now also consider whether he would not be more likely to succeed with a larger sized instrument, or with an elastic gum or flexible metallic catheter ; or with one or the other catheters after having introduced a bougie, or if he intends again to make the attempt with the same instrument, he should wash it clean in the warm water, oil it again, &c. &c., as already described. And if there have been any effusion of blood, which I cannot allow in ordinary cases to be unavoidable,* he must be careful that no coagula are formed and retained in the cavity of the instrument.

It is proper here to remark, that a catheter, comparatively large, that is, one of a size nearly to fill the urethra, is commonly more easily introduced than one comparatively small, especially in lean and lax subjects. There is reason to believe that the principal cause of the failure of the old gentleman in the use of the catheter in Case II, was, that his was too small; it was smaller than any one that was successfully introduced.

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* "I will freely acknowledge that often, from a slight injury, a great profusion of blood will flow ; this is an inevitable consequence of the peculiar structure of the parts, and no great harm ensues ; but that such a discharge of blood is entirely harmless, is a sign of dexterity, or of any thing but awkwardness, violence, and a breach of the cellular substance, I cannot allow."—JOHN BELL.

Another remark I have to make respecting the instrument, is in regard to its curve; which ought to be such that a line running parallel with an inch or more, of the beak end of the instrument, and intersecting a line running parallel with the handle end, will form a right angle: at least I have always been able to introduce a catheter with such a curve easier than any other; and my experience corresponds in this respect with what Mr Hey has written upon the subject.

Sometimes the catheter seems to meet with hindrance before it reaches so far as the arch of the pubes; this circumstance is probably owing to some contraction in the urethra, caused by excessive irritability of the passage; by cold, or by the instrument not being sufficiently oiled; or by the operation being commenced in too rough a manner. In such a case I immediately withdraw the instrument; and perhaps wipe it with a clean cloth, or wash, and oil it again, and then repeat the attempt in some manner a little different; perhaps by keeping the penis more extended, or by exercising a little more caution and care. Sometimes in painful cases of Ischuria vesicalis, upon an attempt to introduce the catheter, a nixus or throe, will immediately commence, and for the time, wholly preclude the possibility of proceeding. In such a case, I would always immediately withdraw the instrument; and the surgeon ought not to attempt to introduce it when the patient feels as if a nixus were about coming on; and if the irritability be very great, so that those throes or spasmodic efforts are ready to recur upon almost every attempt to introduce the instrument, blood ought to be freely taken from the arm, if the circumstances of the case will justify that expedient, and a large opiate immediately administered; and when the system is under the influence of this, the operation ought again to be attempted; or after blood-letting, the patient may be immersed in tepid or warm water, and the attempt again repeated while the patient is in the bath. But I have never had occasion to resort to either of these, except blood-letting, and the tepid bath once in case II. of this paper, to facilitate the introduction of the catheter; and can, therefore, speak of them only from the recommendation of others.

The circumstances of case II. of this communication, were such that it was necessary to exercise all possible caution in order to introduce the catheter with success. The distress of the patient was so great, and the necessity for the operation so urgent; that if the attempt had wholly failed, he must have inevitably perished. For several days and nights, even the most successful introduction of the catheter afforded very slender promise of his recovery: but patience, perseverance, and care, at length overcame every difficulty. The use of the instrument seemed to preserve the life of the patient till the disease wore itself out.*

If it should be objected to the preceding description, and the remarks connected with it, that they are tediously minute, I would reply, that I have derived essential advantages to myself and my patient in the operation of introducing the catheter, by great particularity in every part of the process. Besides; *let it be remembered, that nothing ought to be considered minute, trifling, or unimportant, that can contribute, in any measure to the relief of any one writhing with agony.*

Lynn, December, 1824.

Case of Laryngotomy—and Case of Phthisis Pulmonalis. By SAMUEL A. CARTWRIGHT, M. D.

[Communicated for the New-England Journal of Medicine and Surgery.]

CASE I.

MY belief that the advantage to be derived from the report of an operation, whether successfully performed or not, can be fully attained only by accurately describing the method pursued, and by candidly acknowledging the difficulties which attended it, is my only reason, in describing the following operation, for dwelling on these often neglected, yet important points. On the 31st of August 1824, I was called on to visit Levi Wicks, of this city, a stout hearty child between four and five years of age, who had, a few hours previously, in sipping up the water of a melon, drawn a seed into his windpipe. I found him with great difficulty of breathing accompanied with a shrill cough resembling croup. Consultation being called in, it was thought most advisable to give an emetic of Ipecacuanha. After the operation of the emetic, the little boy became much relieved, and was able to run about the house, his respiration being free and his cough having subsided. Some time in the night his cough and difficulty of breathing returned, but soon went off, and he rested tolerably well. The next morning when I visited him he was out at play. He continued his usual amusements until evening, when after having fatigued himself by running, the cough returned and he soon fell to the ground apparently dead, being breathless and black in the face as if suffocated. In this situation he was taken up by his mother, and being shaken in her arms, his cough returned and he revived. Something could now be plainly heard moving up and down his trachea. His cough at length subsided and he again became perfectly easy. The fits of coughing and difficulty of breathing continued to return, after intervals of ease of longer or shorter continuance. On the evening of the second of September, I commenced the operation by an incision of the integuments covering the larynx, extending from the superior part of the thyroid cartilage to a little below the cricoid. The laryngeal artery was divided, which in this subject ran between the thyroid and cricoid cartilages, not as it commonly does, between the thyroid cartilage and the os hyoides. The hemorrhage was so considerable before it could be commanded, the pulse of the child became so very feeble, and its strength appeared to be so much exhausted, that it was thought most advisable to proceed no farther with the operation at the present time; more especially as the child was very fleshy, having a very short neck and an enlarged thyroid gland, which would necessarily render the succeeding part of the operation both difficult and dangerous. The wound was accordingly dressed. The succeeding day frequent fits of coughing and laborious respiration took place, but in the intervals, the little patient was able to go about the room. He however came very near being suffocated on the night of the 3d. On the 4th of September, I resolved to finish the operation. I admitted no person into the room but physicians. These were Doctors Hunt, McPheeters and Lattimore. They were sufficient both to hold the child and also to assist me in the operation. The child having his hands confined was laid on a table with a pillow under his neck, and his head projecting a little beyond the edge of the table, supported on the lap of one of the medical gentlemen, while another, by taking hold of his arms, drew down his shoulders, to prevent him from drawing them up and thereby shortening his neck. The former incision was now opened by means of a probe. As it had not extended entirely down to the cartilages, these were now laid bare by successive strokes with a scalpel. The depth of the wound was now nearly an inch so fat was the patient. The crico-thyroidei muscles were unusually large. In exposing the cartilages, another small artery was divided and bled so freely, that it became necessary to pass a ligature around it, which was by no means an easy matter, as it lay deep amidst the fat and cellular substance. Although the cartilages were now laid bare, the first few rings of the trachea were not entirely so, as I was fearful of cutting through them into the trachea, and had therefore elevated the knife after it had passed the lower cartilage. I now examined the wound and observed at its lower angle, extending up to the cricoid cartilage, a reddish substance, which I mistook for a muscle but which was in reality the *isthmus of the thyroid gland*, which extended higher up the trachea than usual in consequence of its being enlarged. The child had now ceased to cry but continued *to sob*, which kept the larynx in constant motion. The two cartilages could have been readily separated by a lancet, or the point of the scalpel and a grooved staff introduced, and the cartilages divided in either direction by a bistoury, had it not been for the motion of the larynx produced by the sobbing. I concluded that the safest plan would be to divide the cartilages and about two rings of the trachea, from *without inward*, by one stroke with the scalpel; which could be so quickly finished, that there would be but little danger of any ill consequences from the motion of the larynx produced by the *sobbing:* nor did I apprehend hemorrhage, as the cartilages were now laid bare and alone remained to be divided, with two rings of the trachea, which rings, I little suspected had any blood vessels over them. An incision was now made into the cavity of the windpipe by one stroke of the scalpel, commencing at the superior part of the thyroid and ending two rings below the cricoid cartilage. The isthmus of the thyroid gland which extended over these rings was cut, and a profuse hemorrhage ensued. The blood spouted out furiously to the opposite wall, dashing at the same time into my face and the face of Dr Hunt, while every inspiration drew the blood down the trachea, to be expelled through the mouth, the nose and the wound by violent cough, accompanied with a hoarse shrill sound, produced by the rushing *in and out* through the wound, of air and blood. I instantly cut the bandage with which the child's arms were fastened, and turned him on his face, to prevent immediate suffocation. Dr Hunt and myself then endeavoured to take up the artery, but as it was not one, but two or more arteries which were throwing out blood, and these were deep within the lower angle of the wound, we could not, in our first attempt, succeed. A pair of curved forceps was now introduced and the melon seed was dislodged from the ventricle of Morgagni, and was pushed up through the glottis and came out through the mouth; almost at the same instant the lower angle of the wound was pressed out by the forceps, the tenaculum thrust into the gland, amidst the bleeding vessels, and a ligature put around them all together. One small artery yet continued to bleed, which was caught, by turning out the edge of the wound, and secured. The securing of the bleeding vessels was rendered doubly difficult by the necessary position the child had to be placed in, with his face downwards, also from the violent struggling and coughing in the mean time. So soon as the hemorrhage had subsided, the child threw up, (I suppose from his lungs,) about half a pound of blood. His breathing immediately became free and easy and his cough subsided. The wound was closed by adhesive strips, and a thin handkerchief, enclosing a piece of pasteboard adapted to the neck, was tied over the dressings to keep the head straight and the strips in their places. An anodyne was now exhibited, and the child was dressed and put to bed, after having lost first and last in the operation, which he bore with heroic fortitude, nearly a half a gallon of blood. It was his violent struggling, no doubt, which enabled him to sustain so great a loss. The pulse of the patient for the first forty-eight hours after the operation, was about 130. The Tinct. Dig. and Sp. Æth. Nitr. were used, but having little effect and fearing the accession of bilious fever, 8 grains of calomel were given, which brought away two or three black evacuations, after which, the pulse became slower and the symptoms better. Although the wound suppurated freely the breathing continued perfectly easy and was unattended by cough. The granulations which became too luxuriant were kept under by a weak solution of Nitric Acid. In less than two weeks the wound healed up perfectly, and left but a small cicatrix.

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* Dr Rush.

Whoever undertakes to extract a foreign body from the larynx or trachea, should recollect that it is a much more difficult and dangerous operation, than that of merely making an opening for the insertion of a tube to breathe through, as in cases of tumors of the amygdalæ, bodies wedged in the pharynx or œsophagus, inflammation of the larynx, &c., as in the latter, the opening need not be extensive, and when once made, the difficulty is over ; while in the former, the difficulty of removing the foreign substance from the trachea or larynx, yet remains, after a sufficient opening has been made, and if the opening has not been sufficiently extensive, the difficulty has only begun. It would be well to be provided with forceps having long delicate blades, to grasp the foreign body if low down in the trachea ; and with curved forceps to extract it if in the ventricle of the larynx. In the event of a hemorrhage after the incision into the larynx has been made, as happened in the above case, I am of the opinion, that the best plan would have been, to have immediately introduced a canula, as large as the incision would have admitted. The canula would have enabled the patient to breathe more freely, and might also have been used as a lever, to press out the edges of the wound, so as to expose the bleeding vessels. It appeared to me that nothing short of an extensive incision in so fat a child as the above, would have afforded any just grounds of calculating on the detection of the concealed foreign body, by instruments; or of its expulsion, by coughing. In this case the seed was found to be a very large one, having a rough seamed margin. In cutting through the cartilages of the larynx, from without inward, the instrument cannot well have too keen an edge. The one I used was very sharp, yet the cartilages afforded more resistance, than I had, *a priori*, supposed. I distinctly discovered when the knife had entered the larynx; but had it been dull, I can readily conceive that in dividing the cartilages, the anterior parietes might have been made to approximate to the posterior part of the larynx, and thus both walls of the larynx have been divided.

The intervals of easy respiration, between the paroxysms of coughing, that patients having a foreign substance in the windpipe often enjoy, are well calculated to produce fallacious hopes in their friends, that an operation may be unnecessary; and also a degree of reluctance on the part of the surgeon to operate, which he would not feel, if a mangled limb required amputation, or a compressed brain, the trepan. The reluctance which I felt, in calling a child from his play, to be tied and placed on a table, with a view to make a sufficient opening in his windpipe to search for, and extract a foreign body concealed in its larynx or trachea; an operation rendered unusually difficult and dangerous, in consequence of an enlarged thyroid gland, its short neck and its being so very fleshy, was readily overcome, by a conviction of the absolute necessity of the operation and the danger attending further delay.

CASE II.—PHTHISIS PULMONALIS.

Mr S. N. aged 30, was attacked in January 1824, with an acute inflammatory affection of the chest, which gradually subsided without any manifest critical evacuation. While in a debilitated condition, produced by the original inflammatory affection, he began to complain of a fixed pain in the right side beneath the seventh rib, also of a tightness across his breast and dyspnœa, which were increased when he lay on his *right* side. He also complained of pain in the shoulder, extending a little way down the arm, with a numbness of the limb. A very troublesome *dry cough*, with fever succeeding a chilly sensation, daily attended the above symptoms. After he had continued in this situation for a few weeks, he began to cough up purulent matter, mixed with blood, in great quantities. In one night he coughed up more than two pounds of such matter. In a few days the expectoration gradually subsided and the cough again became *dry*. The pain and dyspnœa were considerably relieved about the time of the expectoration, but gradually returned after its cessation, only to be relieved by another copious expectoration of blood and purulent matter, which would again take place in the course of a few weeks. This was the course the disease pursued for some months. At length the intervals between the expectoration of matter became shorter, and the expectoration itself continued longer, until the *intervals* were gradually lost in an almost constant purulent expectoration mixed with blood. The appetite now became voracious. Hectic fever came on with colliquative sweats or diarrhœa—the eyes of a pearly white—the nails, claw like—the ends of the fingers enlarged. The remedies used in the latter stage were the Nitro-Muriatic Acid bath, cough mixtures, tonics, &c. all of which did no good, and the patient died on the 7th of September. In an hour afterwards, in company with Dr McPheeters of this city, I proceeded to make post-mortem examination. In the first place I plunged a knife into the right side, between the 6th and 7th ribs, and then opened the thorax. The knife was found buried in a large empyema, which rested on the diaphragm below, against the ribs of the right side, as far up as the third rib, and surrounded by the lungs in every other direction. There was upwards of a quart of thick purulent matter of a brownish colour, and mixed with blood contained in the empyema, also two hydatids each the size of an hen's egg. This matter was walled in on all sides by a firm cartilaginous sac, more than half an inch thick, and contained *no opening* either into the lungs, or any other part. Yet the matter contained in the sac resembled very much the matter which had been expectorated. Dr McPheeters called my attention to that part of the pleura which had not degenerated into cartilage, that was reflected off from the cartilaginous sac, it being here lined with a thick coat of purulent matter. The lungs, which enclosed the sac on all sides except the part resting on the diaphragm and against the right ribs, were firmly adhered to the sac; and although the lung in contact with the sac, appeared to be diminished in size yet no abrasion or ulceration of the lung could be discovered; so far from it, the pulmonary tissues in immediate contact with the sac, had the appearance of becoming cartilaginous; nor could the least ulceration be discovered in any part of the lungs; nor did the lungs contain any tubercles or abscesses; but on the contrary they appeared sound in all their parts. When squeezed in the hand they gave out a frothy fluid. That part of the diaphragm on which the collection of matter rested had completely degenerated into cartilage, and the liver below firmly adhered to it. The peritoneal covering of the liver at this part had become cartilaginous. Except the adhesion of the liver to the diaphragm and the cartilaginous nature of its membranes at this part, it appeared perfectly natural and no way diseased.

In the above case had paracentesis thoracis been timely performed, and the matter evacuated, before the formation of the cartilaginous sac, the patient no doubt would have recovered. We are told by Pliny, that Phalereus was once dispaired of by his physicians in consequence of an abscess in his lungs; but Phalereus rather than die with the disease, chose rather to fall by the sword, and plunged his spear in his breast, which instead of killing him, proved his cure. "Phalereus, tum deploratus a Medicis vomicæ morbo, cum mortem in acie quæreret, vulnerato pectore medicinam invenerit ex haste." Lib. vii. Cap. 1.

The propriety of evacuating the matter of an empyema, I apprehend will not be questioned, if, in the first place, it be clearly ascertained that it exists, and in the second place, if there be any known method, by which the matter of the abscess can be evacuated without endangering the life of the patient. Hippocrates informs us, that whenever an acute inflammation of the thoracic viscera after continuing longer than usual subsides, without any evident evacuation by hemorrhage, expectoration, sweat, urine or stool, that we may expect the formation of an empyema. Whenever then, Phthisis Pulmonalis supervenes after such an inflammatory affection, the general health not having been fully reinstated, between the termination of the one and the accession of another, ought we not to view the empyema as its cure? the existence of which will be more clearly proved, if there be local pain in the chest, a cough at first dry, with a tightness across the breast, and a difficulty of lying except on the side which *is not affected.* Hippocrates particularly notices the latter symptom. "Quum tu-

berculum lateri aboritur, tussis dura detinet et dolor, et febris, et pondus in latus incumbit, et dolor acutus eundem locum semper occupat, et situs vehemens, et calidum potum eructat, et decubitum in latus affectum non sustinet, sed in sanum." De Morbis, Lib. 2.

Ought we not, in such cases, instead of trusting the life of the patient to the feeble aid of any article, or combination of articles of the Materia Medica, endeavour to remove the cause of the disease, by making an incision into the side opposite to that on which the patient prefers to rest, and evacuate the matter of the empyema? which like any other foreign substance, would do, keeps up a mechanical irritation on the lungs, and thereby brings on all the awful symptoms of confirmed Phthisis Pulmonalis. Suppose no abscess were found, I can conceive of no evil which would result from the operation, even admitting the case to have been, not an apostematous, but a tubercular Phthisis. If there were no matter to draw off, the irritation, produced in the integuments, by the incision, would no doubt, have as good an effect in diminishing the irritation in the lungs, whether produced by tubercles or not, as the ancient custom of introducing issues or setons, or applying the actual cautery to the integuments; or the modern one of applying blisters or tartar emetic ointment.

The above case shows us, that a collection of matter in the thorax, by enlarging the chest in pressing down the diaphragm, and producing an adhesion between the diaphragm and liver, may, by bringing on a functional derangement of the latter organ, be mistaken for chronic hepatitis. I mistook the case in the first instance entirely. Seeing a large quantity of matter periodically discharged, preceded by pain in the side and shoulder extending to the insertion of the deltoid, and attended with a dry cough, I concluded that an abscess had formed in the liver, and had burst into the lungs; and that chronic inflammation still continuing in the liver, produced a new collection of matter, after the prior collection had been evacuated. But autopsic appearances shewed that such an opinion, was alike erroneous, with the notion of the ancients, that the expectoration of purulent matter was the necessary consequence of an ulcer in the lungs. We also learn from the above case that a sac containing purulent matter by mechanically irritating the lungs, and thereby producing a greater determination of blood to them, may cause the lungs to take on purulent secretion, which we know to be one of the methods by which a part frees itself from congestion. In the above case, the lungs having removed the congestion, produced by the irritation of the sac, by a copious purulent secretion, would secrete little or no purulent matter, until the congestion, (the formation of which was indicated by pain and soreness in the breast, dry cough and dyspnœa,) had made progress to such an extent, as to become the antecedent to the formation of purulent matter, by which it was removed. Finally, we may infer that the great secret of curing Phthisis Pulmonalis, consists in finding out the antecedent of the pulmonary irritation and removing it if practicable; or if this cannot be done, to establish *new antecedents* of irritation in other parts of the system, either temporary or permanent, and by thus producing an increased determination of fluids to other parts or organs, *to diminish the increased determination to the pulmonary system*, the *consequent* of preternatural irritation in that system, and the *antecedent* to those symptoms denominated Phthisis Pulmonalis.

Natchez, (*Miss.*) *Nov.* 13, 1824.

Case of Remarkable Costiveness; and Case of Anomalous Symptoms produced by the Irritation of a Foreign Body. By Dr SAMUEL B. WOODWARD.

[Communicated for the New-England Journal of Medicine and Surgery.]

J. L., aged about 18 years, fell into a cistern, in the summer of 1818, and injured her head. During the autumn, she complained considerably of headache, which increased in the winter and spring following, and was accompanied by pain in the eyes and limbs, coldness of the extremities and surface of the body, which were pale and bloodless. She now ceased to menstruate; her bowels became very costive, and her stomach very irritable. By the use of friction, warm bath, guaiacum, and other internal stimulants, she mended in the summer, and continued more comfortable till the spring of 1820. At this time her headache returned, and was very distressing; derangement of mind followed, and extreme emaciation and debility. Her stomach was excessively irritable; the bowels obstinately costive, the surface cold and pale. During the fall season the costiveness became more obstinate, and the puking increased, attended by much pain in the abdomen, and daily slight hemorrhage from the lungs; the blood expectorated being of a dark colour. At this time, two circles appeared about the eyes, about two inches in diameter, which were at first pale blue, but in the progress of the complaint changed to the deepest indigo colour, (which considering the paleness and delicate whiteness of her skin,) gave her countenance a most extraordinary appearance. She puked regularly every day, usually three or four times, sometimes many more; she rarely threw up food or medicine. Scarcely a day passed that she did not expectorate a few mouthfuls of dark blood. As her puking increased, her bowels became more torpid, and she frequently passed 10 or 15 days without a motion of the bowels. In the beginning of the winter, (December 1820,) she gained some strength; ceased to emaciate, although her stomach was no better, and she took but the minutest quantity of food, and wine for support.

About this time the action of the whole alimentary canal became inverted, and injections thrown up the rectum would be vomited, or spit up in 20 or 30 minutes. Various fluids were made use of, that this fact might be ascertained with certainty. The result was always satisfactory. Oil of turpentine, solution of assafœtida, and laudanum would be tasted by the patient, or smelled by the attendants, in 15 or 20 minutes after they were administered. This inverted action continued most of the time for many months.

Costiveness, with these symptoms of course increased; and in the months of December and January, 1820—21, she went 38 days without an evacuation from the bowels; she took various medicines, and especially, *opium pills*, to alleviate her sufferings.

From the time she had the evacuation till January, she had no motion of the bowels till April, a period of 65 days; and from April, nothing whatever passed her bowels till September, a period of exactly 138 days! She frequently passed no water for 15 or 20 days in succession. And in one instance, she went 30 days without a discharge of urine. The first evacuation from the bowels after this long period consisted almost exclusively of *opium pills*, many dozens of which were in a state of perfect preservation, and without apparent loss of weight.

During all this time, she had either excessive headache, great sensibility of the eyes to light, and much pain in the bowels, with melancholy and dejected state of mind, or slight pleasant delirium, which was attended by great brilliancy of mind, vigour of imagination. She wrote or dictated poetry, and conversed with great fluency, ease, and grace. The transition from one to the other of these states was surprisingly sudden, while the attendants were holding her head, and soothing her mind under the most aggravated distress, she would, of a sudden, exclaim "I am well!" and appear perfectly happy for hours; sometimes days, and so the contrary. Another extraordinary symptom of this case was a double consciousness. When she was delirious, she recollected what passed, and what was said in her former period of delirium, but totally lost all recollection of what took place in her melancholy moments. And when melancholy, and in distress, she forgot all that transpired in her happy moments, but remembered the distress and dejection of former periods of melancholy.

From the autumn of 1821, she gradually improved; had evacuations from the bowels every 30, 20, 10 days, till she became tolerably regular, and is now in comfortable health. This extraordinary case was attended by myself and brother, Dr Henry Woodward of Middleton; and was visited by my friends, Drs Todd, Bruce, Cogswell, and Sumner of Hartford, and Miner and Tully of Middleton; besides many others, who can attest to the accuracy of the statements.

E. G., aged 22 years, had a train of nervous symptoms of the course and progress of which I received the following account from her parents. At the age of 9 years while at play with her mates, she fell from a chamber window, and wounded her head; the wound healed readily without surgical aid, and little was thought of it at the time. From that time forward, she was subject to turns of severe nervous headache which always affected *that part* of the head most severely; and even after the fall, a tenderness was felt on the part that was wounded.

In the spring of 1821, the headache became more severe, and recurred more frequently than before, and she had occasional epileptic paroxysms, which continued to recur at unequal intervals through the winter; at times her mind was also deranged; these however alternating with lucid intervals.

As there was so much tenderness on the part formerly wounded, and as the symptoms were so unaccountable, Dr Cogswell, an eminent surgeon, proposed to operate with the trepan. When the girl heard of the proposed operation, she became perfectly frantic, and ever after refused to see any of the medical gentlemen who were present at that time. In consequence of this, she came under the care of Dr Lyman, of Glastenbury, and afterwards of myself.

When I first saw her, she was excessively irritable; had frequent epileptic paroxysms; and most of the time was more or less deranged.

In the course of the season she lost the sight of the left eye, and subsequently she had severe pain and suppuration in the left ear, which discharged copiously for a long time.

During the month of August, her symptoms continued to grow worse, and on the 2d day of September, 1821, (recollected by her friends, and remembered by us all as the day on which occurred the severe gale of wind,) her jaw became locked, and continued so without intermission through the winter. She became emaciated, and was able to take little nourishment, and that wholly liquid, and which was introduced by separating her teeth with wedges. At this time her situation was most deplorable: fits occurring almost daily, often many times in a day; constant delirium; great nervousness; locked jaw; blindness of one eye; pain and suppuration in the ear.

An inflammation now commenced in the throat, which progressed rapidly, impeding both respiration and deglutition, and seemed to threaten a speedy termination of all suffering. This tumour could not be seen on account of the locked jaw. It terminated in suppuration, and when it broke, it discharged pus freely, and some foreign substance passed down the œsophagus, and lodged there, producing severe distress, convulsions, and insensibility, in which state she remained a long time; when she recovered from it, she declared herself relieved, and said something had been swallowed; her friends were directed to examine the alvine discharges carefully, and in about 48 hours, a *comb tooth*, two inches long, and very large passed her bowels. From this time, all her bad symptoms diminished; convulsions ceased wholly; delirium subsided; her health improved; the eye became better, and in a few months was restored; the pain and suppuration left the ear. The jaw was at once loosened, but it required a long time to regain its power. Her appetite and strength gradually returned, and in the course of a few months her health was restored. There can be little doubt that all the symptoms that intervened between the time of the fall, and the passage of the *comb tooth* arose from that cause alone. The headache and tenderness were caused by the tooth while it remained nearly stationary, and the blindness, suppuration in the ear, locked jaw, epilepsy, and delirium, by the irritation in its passage from the wound where it entered, to the pharynx where it was dislodged.

It is certain it remained in the body 13 years, but with what parts it was in immediate contact during that time is to me matter of conjecture only.

A Case of Rheumatism, with disease of the Heart. By Walter Channing, Jr. M. D.

THIS is a rare disease. There are some circumstances in the following case which make it interesting. I shall state these more in detail, than is ordinarily desirable in the communication of single cases of disease.

L. T. aged 25, an unmarried woman. I first saw this patient April 14th, 1824. The following is the account she gave of her case. About three months since was exposed frequently to cold and wet, while following her occupation as a housemaid; was attacked with pain in the wrists, elbows, shoulders, and back of the neck. Pain is now greatest towards evening. At noon it is the least troublesome. At present she has pain over the body generally, but complains most of the back of the neck, and upper extremities. She has besides headache and occasionally nausea. The tongue is slightly coated. Appetite is tolerable except in the morning. She has then a bad taste in the mouth, and yellowish coat on the tongue. Pulse 80, and rather full. Sleep is disturbed. Has pain in the left side, (in the stomach as she expresses it,) which she has felt for three years. Has lost flesh since her rheumatic attack. The pain has not been steady, or fixed in any part. At times it changes its place suddenly, and has at others been entirely wanting. Countenance healthy.

18th. Since yesterday forenoon, she has had pain in the stomach, and left hypochondrium, extending to the left shoulder. This pain is increased by inspiration. Some cough, this increases the pain. This pain she now says she first noticed about ten days ago, after over exertion in walking four or five miles, and has felt it occasionally since. The rheumatic affection of the limbs has been less since last report. The left hand is now swollen and stiff.

19th & 20th. Shortness of breath; increased pain under the sternum, in the left side, and legs. A very slight appearance of lividness in the face. On the 20th however, the breathing was more easy, but some soreness of throat, with difficulty of swallowing was complained of.

21st. Towards morning became more ill. Chill with severe pain in left side, headache, afterwards heat. Abdomen sore and painful on pressure. Great difficulty of breathing. Much swelling and pain in the hands. Perspiration followed the heat, and at the time of visit, 9 A. M. is relieved, and quite as comfortable as usual. Things continued much the same till the 27th, at this time no uneasiness was felt in the chest. The stomach became disordered about this period. Nausea and vomiting occurred. An emetic was taken and she was relieved. The appetite returned. Meat was craved on 1st May, and was allowed. Some uneasiness in the chest, particularly when lying on either side. This position cannot long be retained.

May 2d. Grew more ill at noon, and did not eat meat. Towards evening, pain, or rather a peculiar and indescribable distress, was experienced in the chest, which extended also to the shoulders. Head and shoulders much elevated by pillows.

3d. Severe paroxysms of distress in the chest, produced by slight chills. The pain began in right hypochondrium, and extended obliquely upward to left shoulder. The chills were accompanied with short oppressed respiration.

4th. An unusually severe paroxysm last night, could not lie in bed, and was obliged to sit up during the attack. Is better this morning, but cannot lie on left side. Was examined by percussion and stethoscope. Chest resounds well every where. Respiration crepitating principally on *right* side. Voice weak, or slightly hoarse.

5th. Paroxysms frequent, sleep broken by them. They were attended with *sense of stricture*, and with pain at lower part of chest, and obliged the patient to sit up immediately on their occurence.

6th. More ill. Was again examined by stethoscope. Over cardiac region, pulsation rather obscure. This was observed on the 4th. Murmur of respiration natural, perhaps somewhat louder than usual. Urine abundant.

7th. Increase of symptoms. Pressure on abdomen did not immediately increase dyspnœa. It did soon however, and a severe paroxysm followed. Pulse 100, obscure.

8th & 9th. Some amelioration in symptoms occurred in chest, and suffered general uneasiness. Pulse as before, but feeble, soft, respirations 35.

10th. Towards afternoon dyspnœa returned with violence, and continued for about 12 hours, obliging her to sit erect. Acute pain in the *left* side. Complains of great sense of soreness every where. Now respirations 40 in a minute, short, feeble. Pulse 88, rather hard. Teeth foul; mouth sore; voice feeble, tremulous. Five P. M. respirations 50. Pulsation obscure over heart. Pain in lower part of sternum. No rheumatic pain.

11th. Drowsy; respirations 23, fuller, deeper. Is tranquill, feeble, dull. No urine since 5 P. M. yesterday. Abdomen distended, tense, especially hypogastrium. 5 P. M. Lying on the right side, more awake; less languid. No paroxysm. Pulse 116. Respirations 26, deep. Copious discharge of urine since morning's report. Commonly but two or three discharges in the 24 hours. Abdomen continues tense but less so than in the morning, skin very dry, forming branny scales on the hands and arms.

17th. From 11th has been more comfortable, the respiration has been easier, pulse at times better. Moving her body, though with the greatest care, has continued to distress her. Pulsation of the heart more distinct. She has been able to lie in nearly a horizontal position, or with her head and shoulders much less elevated. Her countenance however has steadily betrayed marks of increasing disease. The eyes are very hollow, the nose closely contracted. The checks quite sunken. Complexion morbid. On the 15th particularly, her expression indicated that she was absorbed in herself, and hardly sensible to what was going on about her. Slight delirium was observed on that day. Her appetite has been better, and the fœcal and urinary evacuations generally sufficient. On 17th, pulse 120; respirations 44. Whole body sore. Could not bear the light pressure of the stethoscope on the chest.

18th. Yesterday afternoon had increased distress round the body. The least motion of the body aggravates the suffering. These symptoms have continued through the night, and are now present, 9 A. M. Countenance dark. Pulse 80. Appetite gone. Two alvine discharges, thin, dark green. Nurse has noticed in the dejections a sediment resembling iron dust. No fulness, hardness or tenderness in hepatic region. 5 P. M. Much relieved. Motion produces acute pain in the *right* hypocondrium.

19th. At 5 P. M. Severe symptoms; distress continued through the night. Much griping pain, and restlessness. Is now resting on left side, yesterday and the day before rested on either side. Back sore from lying on it. Pulse 96, respirations 38. Expresses herself as feeling better, has appetite, and asks for meat.

From 19th to 28th, when she expired, no very striking change occurred in her symptoms. Her appetite was at times good, and food was taken with relish. The respiration and pulse differed but little from what they had been. At times breathing was easy, and the ordinary position in bed, became more tolerable than it had been before. She was able indeed to lie with very slight elevation of the head. The soreness over the body continued. She could hardly bear the least pressure any where. Motion produced the greatest misery, and it was avoided, except when circumstances made it essentially necessary to the comfort of the patient. The countenance was peculiar. I have rarely seen the expression, and the features too, so much changed by disease. Great anxiety and distress was habitual to them, and reminded me of the alteration that takes place here, during some of the acute and painful diseases of the organs below the diaphragm. The rheumatism, in its earlier periods was very severe, and did not disappear even at a late period of the case.

Dissection.—Externally, body pale, and much emaciated. In some parts covered by the clothes, desquamation of the cuticle existed similar to what had been noticed on the hands and arms sometime during life. On percussion left side of chest resounds well. Right side as high as the fourth rib sounds flat.

Thorax. On opening the thorax, the lungs on the right side adhered to the parietes on the anterior part by membranous bands, apparently of recent formation.

On the left side, similar adhesion, and also to the pericardium. The lungs appeared healthy in every part.

The pericardium was next opened. Some bloody serum flowed from it. It was found partly adhering to the heart. The heart was covered by a false membrane. This was dense, and bloody or flesh coloured. It adhered very closely, and could be separated only by a very slow and cautious dissection. The pericardium adhered to this false membrane more loosely, and in some parts, only by a matter still gelatinous. On the right side of the heart, there seemed not to have been any adhesion of the pericardium to the false membrane, and here a bloody serum was found about four ounces in quantity. This fluid having been diffused over the false membrane, round the heart, had discoloured that membrane. The pericardium was also thickened by a false membrane covering it on the inside. These distinct portions of false membrane, it will be understood were more or less connected together, and are described separately, in order to give a clearer notion of the appearances on dissection.

Abdomen. Liver projecting far up into the right side of the thorax, causing no doubt the flat sound there on percussion. This organ was large, but not enlarged. There were some slight patches of inflammation on the peritoneum on its inner surface, extending a short distance into its substance. Some unusal adhesion of the liver at its under surface to the surrounding parts. Omentum destitute of fat. Stomach distended with liquid. Ascending colon in some measure doubled in itself, the opposing surfaces, adhering together closely. Some unusual adhesions of the cœcum. On drawing up the small intestines, a quantity of pus was observed in right side of the pelvis. This had been contained in a sac formed by adhesions of the intestines with the surrounding parts. The interior surface of the parts forming the sac was gangrenous. The pus contained in it healthy. The abscess had no connexion with the intestinal canal. The cœcum and a portion of the ileum were opened. They contained loose fœcal matter. The rugæ presented a gangrenous aspect, although the texture seemed uninjured.

I have omitted to give any account of the treatment in this case. To have given it would have unnecessarily added to the length of the communication. I have given an outline of a disease of no very common occurrence, the treatment of which however must always proceed on general principles.

On a Species of Premature Labour. By WALTER CHANNING, JR. M. D.

IN the fourth volume of the Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, is a paper on a species of Premature Labour. The following extract has the writer's account of it:

"A lady, apparently healthy, conceives and carries her child in the usual way, till about the seventh or eighth month of pregnancy, she by degrees ceases to perceive the motions of her child; and in about *ten* days or a *fortnight after* this event, she falls in labour, and a fœtus, evidently dead for some time, is expelled. This often happens three, four, five, or six times in succession, or perhaps more frequently, to the same patient, and about the same period of pregnancy. The first time such accident happens, there has generally been some cause to weaken the patient, during gestation; but, in the subsequent instances, it rarely happens that any adequate cause can be assigned. Women who have borne many healthy children have sometimes fallen into this pernicious habit, and continued it for a length of time, and afterwards had *living* children. A memorable instance of this kind occurred in the lady of a Viceroy in Ireland, about thirty years ago. In such cases, it is evident that miscarriage happens in consequence of the fœtus dying in utero."

The cause of this is ascribed either to deficiency, or excess of blood in the mother's system, most frequently the first; or to an acrimony in the fluids of the mother. "By the imprudence of husbands," says the author of the paper, "a venereal taint has been sometimes acquired, which required the use of mercury, and which has been insufficiently employed. The wives of such are particularly liable to the disease in question, although no unequivocal venereal symptoms should exist." "The most likely method then, of preventing the death of the fœtus in utero, is to consider whether in the mother's constitution, there be symptoms of redundant, deficient, or acrimonious blood."

"I have only to remark under the second head, that, in some such cases, I have had reason to think very small bleedings, at distant intervals, of use, although little indicated by symptoms. Was this by creating a tendency to plethora? This is an effect of which venesection has been accused. Symptoms of acrimony in the fluids are more equivocal and uncertain, as well as the means of correcting it.

"In the *unimpregnated* state, sulphureous mineral waters, goat's whey in the proper season, tepid bathing, strong decoctions of sarsaparilla, and slight mercurial courses, may be tried. Where there are no decided syphilitic symptoms on *either* parent, and a healthy child in existence, and assurances of no subsequent exposure to recent infection, it appears rather unreasonable to press the use of mercury to any extent, and indeed it will seldom be submitted to."

A request was made by the Association, that any facts tending to elucidate this subject, might be forwarded to them. Dr Beatty read a communication from which the following are extracted:

"In my case book, to which I have referred, I find that in August, 1812, I attended the wife of a staymaker, who was delivered of a putrid child in the seventh or eighth month, which, she said, was the third that she had borne dead. I discovered so much of venereal affection, as to recommend that they should put themselves under the care of some experienced surgeon for the use of mercury. They applied to Mr Colles; and when she was pregnant in the following year, Mr Colles told me that they had not continued a sufficient time under his directions to satisfy him they were cured of the venereal complaint; which I found to be the case in July, 1813, when I delivered her again of a putrid child in the eighth month. I then declared that I never would attend her again, until Mr Colles told me that he was satisfied with the result of the mercury used. They again returned to him, and fully attending to his directions, in October, 1814, I attended her, when she bore a living girl at the full period of gestation. She has had several living children since.

"In October, 1816, I delivered the wife of a cavalry officer of a putrid child on the eighth month. The gentleman had been on the Continent with his regiment, without his wife, and had contracted a slight venereal complaint, of which his surgeon considered him well before his wife joined him in France. I could not detect any venereal symptom in the parents, but was so satisfied with the cause of the child's death, from the peculiar appearances on the body, that I recommended them to consult some eminent surgeon; and Mr Todd was called in, who met the regimental surgeon with me, and advised the use of mercury, which was regularly persevered in by both for several weeks. After this course pregnancy was soon the result, and in November, 1817, I had the gratification of attending her when she had a living girl. She has had several living children since."

"I have," says Dr Beatty, "met with several cases wherein very delicate women have borne dead children at the seventh month, but not putrid; and have, where I did not suspect venereal taint, constantly succeeded in avoiding the accident by a rigid confinement, even to one floor, and by a very strict attention to keep the bowels gently free, from the earliest period of gestation to the end of the eighth month; and several, to whom I gave permission to go out at that time, have thanked me, saying they were never so happy as in their confinement, and would not accept of my offered emancipation. I do not remember a single instance where good health, good looks, and a continuation of bearing living children, were not the rewards of the confinement."

I was very much struck with the above paper. It brought at once to my mind a lecture, which I heard many years ago, from the late Dr Wistar, Professor of Anatomy, in Philadelphia. My notes from that lecture, are so precisely similar to the above, that one would not only not fail to be struck with the coincidence, but if such a thing were possible, might charge the *anonymous* writer in the Transactions with a gross plagiarism. It is of course impossible that this should have been the case.

Gardien has written much to the same effect, or noticed a peculiar state of the fluids, as among the causes of abortion. He says, "Il est d'observation journaliere que les femmes infectées depuis long-temps du vice vénérien accouchent souvent avant terme et d'enfans morts ou mourans: ils sont toujours maigres et comme macérés par les eaux de l' amnios. Un traitement convenable, dirigé, d'aprés les circonstances qui compliquent la grossesse, eût prévenu ces accîdens."* Gardien indeed, confines his remark to women. The writer of the article we have quoted from, considers the cause, in many cases at least, of the acrimony of the fluids in the mother, to have existed originally in the husband, and Dr Beatty, in his communication, succeeded in removing the predisposition to premature labour by appropriate remedies administered to both. This was precisely the course pursued by Dr Wistar, and he reasoned in the same way. In his cases he was equally successful.

I have met with cases in which the predisposition to premature labour existed in a remarkable degree, and where it did not seem at all to depend on the cause just spoken of. At least it was removed, or disappeared under a course of treatment, which does not ordinarly remove a venereal taint. In one of these cases, a foreign voyage, and residence abroad, produced changes so beneficial, that the usual period of pregnancy was attained, and healthy children born. This female was much exhausted by repeated premature labours, following each other with great rapidity. In another case the mother seemed very healthy, and did not lose her health by miscarriage. She carried the fœtus eight months, in some of the cases. The children when born, were of standard dimensions, and had the appearance of being well nourished. They were not born alive. This patient carried her eighth child to the full time. It was born alive, and lived. The mother died afterwards without being again pregnant.

There is a species of abortion which has received more attention than the above, which is equally unmanageable, and sometimes fatal in its consequence. It occurs in the early months, about the time for the third appearance of the catamenia, had not this function been suspended by conception. Boerhaave, Saccombe, and especially Dr William Hunter, have described this species. Saccombe supposes it to be owing to the occurrence of conception very soon, or immediately after a catamenial period is over. The uterus at this time is in a state of unusual excitement, which determines much blood to it, and by excessive nourishment of the fœtus, an undue development of the fœtus is brought about. I have thought this species might be explained in another way. The catamenial function has been regularly performed for some years. It has been quite healthy in its periods, and quantity. Conception takes place and suspends this function, and when well sustained, it perfectly compensates its absence. It may happen that the periodical function is not thus compensated, or rather that there is a stronger disposition in the womb to restore in itself what has been accidentally suspended, than to allow the new state of things to continue. It does this, and abortion is the consequence. This explanation is supported by the time at which this species most frequently occurs, it being at or near a catamenial period. Out of ten cases noticed particularly by Boerhaave, nine happened at the period. It is supported by the practice which has been found most successful in these cases. This has been small bleedings in the first, second, and third months, once or more. The determination to the womb, has in many cases, been prevented by this course, and the fœtus carried to the full time.

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* Traité d'accouchemens, de maladies des Femmes, &c. Par C. M. Gardien, D. M. &c. &c. Tome second, p. 125.

Bloodletting in these cases will not always succeed. I have distinctly in recollection one case, in which it was practised, where numerous abortions had been suffered. In the last attempt, it seemed to promise a favourable issue. The fœtus was carried to the fifth month. Great irritability, however, was manifested in the system for much of the time. It increased with the progress of pregnancy; convulsions at length occurred, and were fatal. In this case pregnancy was positively a disease. It had cured itself to be sure, by the process of abortion. But under this the system was sinking, and it was a sound practice which attempted to prevent farther exhaustion, by preventing abortion. In this case it should have been mentioned that hemorrhage, to an extreme degree, attended labour, whether premature or otherwise. The patient had in some instances, carried the child the full time. Her system had been disturbed originally by the frequency with which this had been the case.

There is another species of abortion, if a single case may make a species. It is believed it is not of infrequent occurrence. The individuals who furnish these cases, are married late in life; have been luxurious livers; and have habitually used but little active exercise. They have good health; are fleshy, if not plethoric. I have observed the following to occur in such a case. The individual is between thirty and forty before marriage. Becomes pregnant. In a few weeks after, and without apparent cause, is seized with slight discharge of blood from the uterus, then with trifling pains, which gradually become stronger, and at length the ovum is thrown off. This occurs at first about the second month. Another pregnancy takes place, and the fœtus is carried rather longer, and is then expelled. The third may remain in utero through the third month or longer, and afterwards the fœtuses go to the full time. I have known three abortions to occur after this manner, and then four successive pregnancies to go on without disturbance, and living children born. This species differs from the last in this; that the succeeding pregnancies advance farther and farther, and this too where no special means are employed. And in these individuals the general health remains good. We might, in such cases, look for abortion to become habitual. It is not so. Pregnancy advances farther and farther, as was said, in the succeeding cases, as if the uterus acquired new powers of continuing the function, by having already sustained it. I have met with but one distinct case of this kind, and it may be that this belongs to that variety of the writer in the Transactions, in which the general health is too good for healthy pregnancy.

Case of Laceration of the Uterus without Pain. By Dr E. W. Cheney.

[Communicated for the New-England Journal of Medicine and Surgery.]

On the 12th of December, 1822, I was called to visit Mrs C. aged about 35; mother of three children, the eldest about 16; the youngest, 8. She was now pregnant, and I found her considerably reduced by uterine hemorrhage. She informed me that she did not expect to be confined until the last of January; that she had hurt herself very severely, by slipping, while drawing a pail of water from a deep well with a pole, and that the hemorrhage immediately followed. After the usual remedies had been employed, she was tolerably comfortable for some days. On the second day of January, 1823, I was again called to visit her. I found her again very much reduced by flooding, which had continued, with intermissions, for the last three days. From what I could learn from her attendants, the quantity of blood lost, had not been very large, but the effects were alarming: the patient being continually faint; the extremities cold, and the countenance ghastly. Considering an examination immediately necessary, I had her, for that purpose, merely turned on her left side, any motion seeming to increase her faintness. In this position, I could not reach the head of the fœtus. I then had her placed nearly erect, by which her faintness was somewhat relieved. I could now distinguish the head of the child through an irregular opening, which I supposed was the os uteri, in a partially corrugated state, the parts being filled with firmly coagulated blood.

The examination produced no labour pains, and I could not learn that she had at any time, had any worth mentioning; the hemorrhage seemed trifling, *and she rested tolerably well* during the remainder of the night, excepting a difficulty of breathing, and some pain high in the right side and shoulder which was much increased by any motion. On the morning of the 3d, she seemed more comfortable, and I left her from 9 o'clock A. M. until about 2 P. M., when on visiting her, I found her bad symptoms very much increased; the difficulty of breathing was aggravated, and the countenance more ghastly; still she had no labour, nor external hemorrhage. I had before feared internal hemorrhage, and her appearance strongly confirmed my belief that she was suffering from that cause. By my request, counsel was called, whose opinion coincided with the one I had formed. We continued with her during the night, constantly hoping that labour pains might come on, and delivery be effected; but although we made frequent examinations during this time, we could discover nothing of the child, which we attributed to flaccidity of the uterus, together with internal hemorrhage. The difficulty of breathing continued, but the patient complained of no pain, except in her side and shoulder. Being unable to render her any assistance in her present situation, and having other patients who required my attendance, I left her, after explaining to her husband my views of the nature of the case, and directing him to notify me immediately if any change occurred. I was detained from home until late at night and from my not hearing from her during the afternoon, I hoped she might be more comfortable, but in the morning I was informed that she sunk gradually during the night, and expired about 4 A. M.

Several physicians had seen her during this time, and nearly all agreed in the opinion, that internal hemorrhage was the immediate cause of death. The abdomen was much distended, but the child could not be as distinctly felt as usual. Permission having been granted, I proceeded in the presence of a number of physicians, to open the body. On opening the cavity of the abdomen, the first thing which presented, was the proper membranes, surrounding the fœtus, which were entire, and distended with water; and I now found that the whole contents of the uterus had escaped through a laceration of its fundus into the cavity of the abdomen. The child still lay in a natural position with its head resting on the contracted uterus; the placenta lay in the upper part of the pelvis. Large cakes of coagulated blood were in different parts of the abdomen, which were considerably putrid. Every appearance clearly shewed that the laceration must have happened a considerable time previous to death. Her true situation had not been thought of, from her never having had any labour pains, nor indeed complaining of any pain in the region of the uterus; lassitude and debility seeming through the whole the only alarming symptoms, and the immediate cause of death.

What renders this case singular, is, that there should have been no pain. From this cause, I was totally deceived as to the nature of the case until I was convinced by dissection.

A question naturally suggests itself; at what time did this rupture happen?

From the symptoms and appearances, I am led to believe it happened previous to my seeing her on the 2d of January; for on the first examination in a horizontal position, I could feel nothing *distinctly*, of the fœtus, but when afterwards the patient was raised nearly erect, the weight of the child pressed the uterus so low that I could reach the head through the os uteri, and the rupture of the fundus which I did not distinguish at the time from the parts being filled with firm coagula. Might there not have been a partial laceration of the walls of the uterus at the time she received the injury in December, which was followed by hemorrhage? and might not this partial laceration have been completed by the first contractions of the uterus even before her pains had become hard enough to cause much complaint, or sufficient to induce her to mention them as labour pains?

Richmond, (Ontario Co. N. Y.) Dec. 1824.

Cases of Convulsions produced by eating the rind of the Cucumber.

By SAMUEL WEBBER, M. D.

[Communicated for the New-England Journal of Medicine and Surgery.]

ABOUT 8 o'clock in the evening I was called to see J. Seymour, a tailor by trade who, I was told, was seized with fits. Arriving at his lodgings I found him upon the bed in a state of great agitation, tossing his body and limbs, distorting his face and rolling his eyes wildly and incessantly. He made no answer to my inquiries respecting his complaint, but stared at me with a mixed expression of want of comprehension and terrour. A lad who slept with him told me that immediately after supper he had eaten a large cucumber, with the rind on, without any condiment, and going to bed soon after, fell asleep. In about half an hour he awaked suddenly, and starting up exclaimed that he felt as if he were going to faint away, and immediately fell into a fit. The boy aroused some neighbours who coming in found him in a state similar to that in which I saw him, and immediately sent for me. Previously however, to my arrival he had a second fit which had just left him. Judging that the fits were occasioned by the stomach's being oppressed by crude and indigestible aliment, it seemed necessary to give an emetic immediately, but finding that the pulse was unusually strong, and tense and the head evidently much disordered, I deemed it best to premise bleeding. While putting a ligature around the arm for this purpose, to do which, however, it was necessary to constrain the patient by force, as he did not seem to comprehend my intentions, he was attacked by a third fit. It was convulsive, and greatly resembled epilepsy, terminating in stupor. While he lay insensible, finding his pulse still more full than before, I opened a vein and allowed the blood to flow till returning animation and great jactitation compelled me to desist, after having taken away, as nearly as I could estimate, about fourteen ounces of blood, from a pretty large orifice. His state now seemed pretty much as before the last fit, except that the restlessness and wildness were perhaps rather increased. During this interval a powerful emetic of Sulphate of Zinc had been prepared, which, after many ineffectual attempts to induce him to swallow it, I forced down his throat; the effect was almost instantaneous, and a large quantity of greenish fluid was thrown from the stomach mingled with undigested aliment, particularly with pieces of the cucumber. After vomiting three or four times, he fell asleep, and I left him in charge of a pupil, with directions to give him on awakening another dose of the emetic, as I did not think the stomach sufficiently evacuated. In about two hours it was reported that he had taken it but without effect, but that his condition generally was more comfortable, as he seemed to recognize those about him, and readily replied to their questions though sometimes rather inconsistently; his skin was warm and moist and his pulse nearly natural. I sent an Emetico-Cathartic of Antimony. Ipecac and Calomel to be taken immediately, and, as it was late, went to bed, telling his attendants to call me if any worse appearances should present themselves. Between four and five in the morning I was called with the intelligence that he had another fit, it had however ceased before I could reach him, and I found his situation pretty much as it had been described to me the evening before, after the sleep succeeding to the operation of the emetic. The emetic I sent him had not been taken. When his attendant proposed to him to take it, he said that he would do so. It was accordingly brought to him, he took it as if with the intention of swallowing it, but after holding it in his mouth a few seconds deliberately turned his head on one side and spit it out, and then laid down in bed as if he had done right. My presence seemed to frighten him, but he said that he felt as if he could sleep and I left him in the hopes that rest might render him more collected. At 7 o'clock his attendant came and said that he appeared quite rational, and was willing to take any medicine I thought best. I gave him about ten or twelve grains of Calomel to be followed by salts and senna, and finding that he complained of pain in the back of his head applied a large blister to the nape of the neck. He likewise complained some of a distressed feeling in his stomach and bowels, though his replies to my questions were sometimes so contradictory, that I did not always know how much to believe him. The salts and senna were rejected soon after being taken, and the stomach became so irritable that no medicine could be retained. This lasted till towards night when the calomel operated and he seemed to be easier, and in the course of the evening took and kept down one or two effervescing draughts and a cup of tea. At nine in the evening he had another fit, though very slight in comparison with the preceding ones. After this he dropt asleep and slept at intervals the greater part of the night, without any disturbance except a slight convulsion at four in the morning.

The next day I found him pretty much as before, except that the restlessness was greater, the pulse quicker though not so strong, and the moisture of the skin greater. The blister had drawn very fully, it was now dressed, and he took an active dose of Pil. Cochiæ. Soon after taking it he vomited and continued to vomit through the day whenever he took any thing into the stomach. The pills however operated about four in the afternoon, occasioning a copious and very offensive dejection of a dark colour. Soon afterwards he had a severe fit, upon recovering from which he complained of his heads' being more painful and of great distress at his stomach. A large blister was applied over the latter, and sinapisms were applied to the feet, and as his stomach became easier soon, I gave him a tea-spoonful of Oil of Turpentine saturated with camphor, in the hopes of preventing a recurrence of the fit at 9 o'clock, at which hour it seemed to me there was reason to expect it. This dose appeared to have the effect of delaying it, as it did not occur until after ten, but though slight it was his last, as he never recovered from it. Circumstances prevented me from examining the body.

This was a perplexing case to me. The patient was a young man of a very slender frame and almost feminine mobility of constitution, had been much debilitated within three months previous to his death, by two violent and protracted attacks of the colic, and, as I was afterwards informed, had suffered for several days before being seized with the fits, with symptoms threatening a recurrence of his old complaint. Some peculiarities in his situation prevented my doing all for him that I wished to do, though several little things were done in addition to the treatment already mentioned.

It seemed to me at first that the fits were purely sympathetic, occasioned by gastric and intestinal irritation from the presence of crude and indigestible aliment, and would probably be readily removed by removing the exciting cause; there was however after the three first fits, a constant appearance of some affection of the brain, independent of the gastric irritation, for which I could not well account; it was evinced in the wildness, fulness and glossiness of the eyes, (without however any uncommon appearance in the pupil) and in many little incoherences of behaviour, as he never at any time appeared altogether sane. The symptoms did not indicate oppression of the brain acting simply as such, nor yet inflammation, but taken as a whole conveyed to me the idea of a person suffering under the effects of some acrid narcotic poison, not of a very active nature, but capable of producing fatal effects if given in a very large dose, or under circumstances peculiarly favourable to its deleterious influence. Whether any such principle is to be found in any part of the fruit of the cucumber I do not know, for though I have often heard the rind spoken of as poisonous, and of instances of death occasioned by eating it, yet I never met with any detail of the circumstances, that would enable me to judge whether the accounts were correct. Not long however after the above case, I met with another resembling it in so many points that I was inclined to think there might be some foundation for the opinion abovementioned. The particulars were these,—

The patient was an uncommonly athletic young man, but in consequence of the illness of his brother for a few preceding weeks, had rather overworked himself, and from heat probably, in conjunction with errors of diet, had had one or two attacks of a febrile eruption which from the account given I judged to be Urticaria. One of these attacks was a day or two previous to his illness, and he had not wholly recovered from it when one forenoon he ate a raw cucumber, without taking off the green rind. Soon after this he went up to the village at some distance from home, and did not return till night. He then complained of feeling unwell, and soon went to bed. Shortly after one of the family going into the room to speak to him, found him lying insensible. Some domestic stimulant (saffron and snakeroot tea I think) was given him, which restored him to sensibility, but finding that he seemed to be seriously ill they sent for me.

Upon my arrival, I found him afflicted with convulsions, and delirious in the intervals. The convulsions were not the same as in the first case, but bore a greater resemblance to the spasms of tetanus, consisting of a rigid contraction of the muscles, moving the jaws, and the flexors of the fingers, and an equally rigid extension of the limbs and trunk, while the eyes were turned up so that only the white could be seen. They were of short duration though four or five would often come in rapid succession. During the intervals he was very restless, tossing himself about in the bed, and frequently starting up and staring around him with the same mixed expression of wildness and terror, as was mentioned in the first case. What little he said was very rambling and incoherent. His skin was warm and wet with profuse perspiration except the lower extremities which were chilly. The pulse was natural, or nearly so.

Finding that he had made several ineffectual attempts to vomit, I encouraged it by repeated doses of Ipecac: and plentiful draughts of warm water, which he took readily, and in the course of two or three hours threw up a large quantity of green, acrid, porraceous fluid, containing portions of undigested aliment, among which I noticed seeds and other fragments of the cucumber. After vomiting he fell asleep and slept soundly and quietly till five in the morning. Finding him then to all appearance perfectly rational and complaining only of some pain in his head with a sense of uneasiness in the bowels, I left him after having given him an active dose of calomel and jalap.

In the afternoon he was rather worse. His medicine had not operated; he had had several convulsions in the course of the forenoon, and had appeared at times to be wandering in mind. His pulse was but 48 and full, and he complained very much of pain in his head. With some difficulty, and after opening a vein in each arm, I took from him about 8 ounces of blood when it ceased to flow. This small quantity, however occasioned some faintness, and greatly relieved the uneasiness in his head. A large blister was applied to the back of the neck and a dose of salts given. The bowels were freely moved in the course of two hours. A dose of Dover's powder was taken at bed time and he rested well during the night. Next morning about ten the convulsions recurred again, followed by increase of pain in the head, pulse 48. I again tried bleeding but with no better success as to quantity than before, though as before it gave relief. He afterwards took a dose of pil. Cochiæ, to be followed with salts if it did not operate in 6 hours, and was directed to take a tea-spoonful of Oil of Turpentine saturated with camphor every 4 hours, and in case of a recurrence of the convulsions, 20 drops of laudanum, 10 of Aqua-Ammoniæ, and a tea-spoonful of nitrous ether every half hour till they ceased or signs of stupor appeared, and a tea-spoonful of Tincture of Lavender and ether every ten minutes in the intervals between the laudanum.

Next day he appeared rather better. The bowels had been moved twice by the medicine, and though the convulsions had recurred once or twice, they were slight and had been promptly checked by a single dose of the laudanum, &c. His tongue however still remained covered with a thick coat of light brown fur, as it had been from the first. There had been no evident delirium, though his eyes and countenance occasionally exhibited the peculiar expression before noticed. During the whole time cooling applications had been made to the head. The same remedies were continued, except that Calomel and Jalap were substituted instead of Pil. Cochiæ. The bowels were again moved in the afternoon and he appeared mending until evening, when apparently in consequence of the excitement occasioned by the visit of some acquaintance, who were admitted to see him contrary to my express directions, the fits recurred with great violence and were not stopped till after taking three doses of laudanum, and they then left him almost incapable of speaking or swallowing, though he soon fell asleep and slept quietly the greater part of the night. I found him in the morning with these new symptoms, with great prostration of strength and pain in the head. The pulse which the day before was 60, had again fallen to 48.

As there was considerable swelling about the root of the tongue, a blister was applied on each side of the throat, the hair was cut close, and a cloth applied to the head kept wet with a solution of Muriate of Ammonia, a cathartic of Rhubarb and Colocynth was given, 3 grains of Assafœtida were administered every hour, and rubefacients were applied to the feet and legs. These means together with a blister on the stomach the succeeding day, were continued in addition to those before mentioned, for three days before any considerable amelioration appeared in the patient's condition. After this he amended rapidly, the medical regimen being gradually discontinued as appearances justified. The last convulsion happened on the eighth day, when he had been free from them for 48 hours previous, and seemed to be excited by a person from a distance coming unexpectedly into his chamber. During the first six days he had several convulsions in the course of every twenty four hours, most commonly in the beginning of the forenoon and the latter part of the afternoon, though occasionally excited by any unusual occurrence. During the night he generally rested tolerably well, and sometimes slept a little in the course of the day. The hearing was morbidly acute, and the eyes were painfully sensible to the light; the latter did not wholly lose the peculiar expression before mentioned, until after the convulsions had finally left him. The head was rather more hot than natural, but the rest of the surface varied but little from its usual temperature or degree of moisture.

The favourable termination of this case was contrary to my expectations, for so severe were the effects of the convulsions that took place on the third night, that for three succeeding days I scarcely expected to find him alive at my next visit. The characteristics of the complaint in each case seemed to be, great irritability in the nervous system, and disorder of the stomach and bowels, the former circumstance being more distinctly marked in the second case, and the latter in the first.

It may appear strange to some, that I should have exhibited opium to a person labouring under such symptoms as a severe pain in the head, intolerance of light and noise, accompanied by an unnatural slowness and fulness of pulse. I found however that these symptoms were greatly aggravated by every repetition of the convulsions in both cases, and as such a repetition had proved fatal in the first instance, it seemed to me that the irritability of the system was to be subdued by whatever would produce the effect, as no risk from the remedy seemed greater than that of the disease, and besides, being foreseen might in some measure be guarded against. Moreover it did not appear to me that these symptoms proceeded from disorder in the sanguineous function, so much as from that of the nerves, and I thought that the antispasmodic quality of opium would more than counterbalance its other effects. This seemed to be the case, and the use of it was persisted in until the convulsions entirely ceased; though by other means in the intervals, and by the conjunction of other antispasmodics, I endeavoured to lessen the necessity of employing it.

Charlestown (N. H.) Nov. 7, 1824.

Case of Jaundice, Bilious Concretions, and the Passage of a large Gall Stone. By Dr ARTEMAS JOHNSON.

[Communicated for the New-England Journal of Medicine and Surgery.]

ON the 22d of October, 1822, I was called to visit J. H. of Smithfield, (R. I.), aged 72 years, who had been ill for several weeks, with what he termed, (and very appropriately,) a bilious disorder. This gentleman, being of the denomination of Friends, and in affluent circumstances, had lived of late years rather a sedentary, though a remarkably temperate life. Being of a studious habit, possessing a pretty strong mind, he had, in the course of his reading, bestowed considerable attention on the study of diseases and medicine. His faculties being but little impaired, he was able to give a more accurate history of his own case, than can generally be obtained from a sick patient. He informed me that for many years, he had had frequent attacks of colic, produced, as he supposed, by his bilious habit; but had generally been able to get relief by his own prescriptions without the aid of a physician. Rhubarb, castor oil, enemas, &c. had frequently afforded relief; but he was obliged, at some times, to have recourse to emetics and to calomel.

For several days previous to my calling on him, he had been using the above remedies, but without producing their former effect, or the least alleviation of his sufferings. At this time, he had nausea; continued pain in the epigastric region; a brown, dry tongue; the pulse 110 in the minute, not full, or indicating any great degree of *active* inflammation; the skin dry, and exhibiting the sallow appearance, usually noticed in confirmed bilious cases. His appetite had been poor for several weeks past. For the last 3 or 4 days, the stomach had been able to retain but very little, even of liquids. He was persuaded, that nothing had passed from the stomach through the intestinal canal for at least 3 days, and was under the impression, that a lesion or rupture of the intestine had taken place, through which if any thing did pass, it must of course go into the abdominal cavity.

Taking into consideration the patient's own history, and the existing symptoms, I was fully satisfied of a *morbid* state of the liver and its functions, and aware, that, unless speedy relief could be afforded by active means, he could survive but for a short time. I consequently directed a large blister to the epigastric region; from 8 to 10 grains of the S. M. Hydrargyri to be given, and if without effect, to be repeated in three hours, followed each time by an infusion of senna, and the sulphate of Magnesia, and assisted by frequent enemas: fomentations to the abdomen were also applied.

Viewing the patient to be in imminent danger, I suggested a wish, that Dr Wheaton of Providence, might be called in consultation the next day, which was agreed to.

23d. Met Dr W.; found the patient much as yesterday. No evidence of an operation of the cathartic ordered yesterday. A little feculent matter only, was returned with the enemas. He had vomited considerably; pain continued; the pulse, appearance of the tongue, &c. indicated no change for the better. It was concluded to persevere in our efforts, to remove the obstruction, whatever the cause might be, by a further use of cathartics. A pill composed of equal parts of the S. M. H. and Jalap was ordered to be given every two hours; the infusion of senna, enemas, &c. continued as yesterday. He was still confirmed in his belief, that a rupture of the intestine had taken place, through which was a passage out of the natural course. From this impression, Dr Wheaton, as well as myself, endeavoured to dissuade him, as there was no particular symptom to warrant such a conclusion, the abdomen being but little if any more tumid than natural. We left him with an appointment, that Dr Wheaton should meet me again at nine o'clock the next morning.

24th. This day Dr W. being out of health, sent his partner in business, Dr Parsons. We met at the time appointed, and found our patient with more aggravated symptoms. The pulse over 120 in the minute, though feeble. The tongue very dark and dry. No effect from the cathartics, &c. ordered yesterday. He had vomited frequently, a dark, offensive matter, and had failed much in strength. Every hope of his recovery seemed now abandoned by an anxious family. The patient still retaining his faculties of mind, was rather opposed to persevere longer with cathartics, and indeed we neither of us felt much confidence in their further use; he however, expressed a wish that something farther might be attempted for his relief. We were now of the opinion that the obstruction was in or near the duodenum; and whatever the cause might be, we could not consider ourselves warranted in persevering longer with cathartics. If it was a Schirrus of the Pylorus, or its neighbourhood, we had no hope of affording, even scarcely a temporary alleviation. But from the symptoms, we felt ourselves justified in referring the cause to bilious concretions, either formed in the stomach, (cases of which I have seen,) or in the gall bladder, passing, or having passed the ductus communis. The stomach being considerably distended, the contents of which were extremely offensive, we concluded to direct several doses, composed of Ipecacuan. 10 gr. Tart. Antimony, 3 gr. to be repeated, if required, not merely with a view of evacuating the stomach, but chiefly with a hope, that a more powerful effort, produced by the emetic, might accomplish the expulsion of the obstructing substance.

We agreed to visit the patient the next morning, though with but slight expectation of his surviving for the twenty-four hours.

25th. We called as per agreement, and much to our satisfaction, found the patient greatly relieved apparently in a pretty comfortable condition. We learned that the first dose of Ipecac. &c. as mentioned above, was ejected without producing any sensible benefit. A second portion was given, and the third in a short time after. This proved powerfully emetic, by which much offensive matter was ejected. He observed that while in a strong effort of vomiting, he was sensible of something giving way suddenly in the stomach, or upper part of the intestine. Soon after this he had a copious evacuation of the bowels, followed shortly after by several others. The pain, nausea, and vomiting had ceased, and no unnatural fullness of the stomach or bowels remained. Though weak, he appeared greatly relieved. The tongue moist, coat loosening; a partial ptyalism had taken place from the S. M. Hydr.; no unnatural degree of thirst; the pulse had come down to 85. He was able to take and retain, gruel, rice-water, &c. His febrile symptoms being slight, we prescribed simply small doses of Spt. Nit. Dulcis, and Vin. Antim. to be given occasionally, with a light cordial diet.

26th. I visited him; to appearance improving; no sickness of the stomach; the bowels remained free; could take of gruel, rice-water, and a little wine, but no desire for other food. Treatment continued.

I did not visit him again till the 29th. No difficulty of the stomach or bowels had returned. In addition to his previous diet, he was able to take a little broth; but little increase of appetite, I therefore directed a slight tonic course. For sometime after this, he continued gradually to improve, though he could take but little solid food, nor could he bear tonics so well as could be wished.

At this time I discontinued my visits, with an understanding that he should send for me, whenever he deemed it needful.

On the 22d of December following, (an interval of more than 7 weeks,) I was called for, on account of a complaint, which *he* supposed to be Piles or Hæmorrhois. He stated he had formerly been much afflicted with that difficulty, and had been relieved by scarification with the scalpel, or lancet. He informed me, that this tumour, or swelling had come forward very quick, as it was not more than 2 or 3 days since he perceived it, and was now very painful when at stool, obstructing the fecal discharges.

After some conversation, I concluded tomake examination per anum. Placing him in a favourable posture, and directing him to make some effort downwards, I could discover nothing external, indicating the difficulty in question. On introducing the finger nearly its length, I discovered a very hard tumour, as nearly as I could judge of the size of a butternut. From its situation being nearly out of reach, I could not be certain whether it adhered to the intestine, but was under the impression, that it did not, as it did not appear to advance with the motion of the gut on making an effort downwards.

I therefore gave my opinion, that his complaint was not Hæmorrhois. He, however, still persisted in his *own* opinion, and it was with much difficulty I could dissuade him from an immediate use of the scalpel. I observed that it was possible it would prove to be an extraneous substance, and by proper means passed off. In case it should be found to adhere to the intestine the operation would be both difficult and dangerous, and had better be deferred for a day or two at least, till something more definite, might be ascertained of its true character. I then ordered a frequent application of olive oil to the parts, emollient injections, and to keep the bowels free with ol. ricini.

The second day from this, after much pain and difficulty, he voided the *tumour*, which proved to be a large gall stone, the size and appearance of which will be given below. This was satisfactory evidence of the nature of his case from the onset. For a month after this, he had some prospect of recovering, had gained a little strength, though his flesh gradually wasted. The bowels had resumed their natural *movement*, though the feces not their natural appearance.

22d of January, 1823. This morning he was attacked with a severe ague, which continued for some time. A message was sent for me to visit him as soon as convenient; living at a distance of six miles, and being necessarily detained, I did not arrive till towards evening. The ague had subsided, I found him in a considerable degree of stupor. The pulse over an hundred, attended with heat and thirst, though the skin was a little moist; the bowels a little relaxed. I directed small doses of Ipecacuan. Compos. and Pulv. Antimonialis to be given occasionally, with such nutritive drinks as he might be able to take.

I saw him again on the 24th. His febrile symptoms had subsided; no return of ague; but little thirst; the pulse had come down to 75; his appetite entirely gone; though his debility increased, he was exercised with no pain. I again resorted to tonics; among other things, the bark in different forms was recommended, but he was unable to bear them.

He continued to emaciate, and sink gradually till the 25th of February following, without pain or much apparent suffering, except that of debility. He had no cough; respiration perfectly free, and (what might have been expected under the circumstances of his case) he was free from any appearance of hectic fever.

Feeling much interest in the case, and extremely anxious for a full demonstration of the real state of the liver, and the manner in which this large substance found its exit from the gall bladder, I prevailed on the family for permission to examine the parts, post mortem. Accordingly on the 26th, Dr Parsons of Providence attended with me for that purpose, a particular description of which will be furnished by that gentleman.

Pawtucket, Nov. 27th, 1824.

Appearances on Dissection—with remarks. By Dr Parsons.

The abdominal cavity as well as the surface of the body was strongly tinged with yellow. On raising the liver and exposing the biliary vessels the parts were found so changed in structure that in their present situation, it was impossible to distinguish one from another. I therefore removed the liver, stomach, and part of the intestines from the body, and on laying open the stomach from the cardiac to the pyloric orifice, and continuing the incision into the duodenum, discovered a large opening in the side of this intestine, through which my finger could easily pass out toward the liver. In this passage I felt a hard substance extending into the gall bladder, and on cutting into it, found it to be an irregularly shaped mass of biliary concretions, slightly adhering together in the quantity of a table-spoonful. When this mass was removed the gall bladder seemed to be continued on in nearly a direct line from its fundus into the duodenum, but was narrowed near its mouth.

The biliary ducts were so involved in a mass of morbid structure as not to be discovered.

From all this it would appear that the gall stone which passed per anum, moved from the gall bladder into the cystic duct, perhaps the common duct, and was too large to pass through it; that it excited inflammation between the duct and duodenum, which produced adhesion and finally ulceration that made a passage for the gall stone into the duodenum,—that the act of vomiting from the emetics forced it along and thus afforded immediate relief, and that bile after this flowed through the new passage, which for a time aided digestion, and produced a state of convalescence;—that a relapse was the consequence of another biliary obstruction as indicated by yellowness of the skin, and clay coloured stools, and by the presence of a mass of calculi found, *post mortem* as above mentioned. But how these could form after so large an opening existed for the passage of bile, is not so easily understood. Perhaps the walls of the cyst, thickened as they were by disease, no longer retained their elasticity to force out all the contents, and that a part of it remaining, had, by the absorption of its aqueous part, become inspissated and concrete in the cyst, and finally obstructed the new passage.

Here it may be observed that the patient's sensations, so alarming to himself, and so absurd to our conceptions, were not without foundation. From the ulceration in the side of the intestine, an opening must have existed at the time he spoke of it, and if a sensation of aliment passing out of it could be felt in any case it might in this. I point to it here as a diagnostic symptom to be observed in future cases of a similar nature.

Dr Pemberton in his valuable treatise on diseases of the abdominal viscera, speaking of the use of emetics to force out gall stones, remarks, that "the mode by which a gall stone passes seems analogous in its effect, though not exactly in the peculiar process, to the mode by which a fœtus is enabled to pass from the uterus; for in this case the passage is prepared, and the propulsion is expedited by the contraction of the uterus upon the liquor amnii: by this the os uteri is so dilated as to allow a more enlarged passage for the fœtus. The cases agree as I imagine in this respect, that the passage for the exit of the solid body is prepared by the fluid surrounding the solid, and not by the solid itself.

"This idea of the passage of the gall stone may perhaps serve in some measure to explain the uncertainty in the power of emetics in forwarding a gall stone. We all know that the effect of an emetic is not only to produce relaxation of the whole body, but also to increase the secretion of bile: this increased secretion of bile if its exit is prevented, will mechanically increase the distension of the duct, and thus will a passage be opened for the calculus. If this position be true, it will follow that an emetic cannot assist the expulsion unless there is a total stoppage of the duct; for without this, the bile would pass off and no distension take place. The frequent failure of emetics, in making any impression on the disease, sufficiently argues a modification of the complaint over which they have no power. This modification I take to be that state when the stone, in consequence of its angles, does not completely close the duct."

In the case above related, the gall stone that passed per anum, and which is now in my possession, has a smooth round surface, and therefore, according to Pemberton was well formed for propulsion by the act of vomiting. It is of an oval shape measuring nearly two inches in length, and bears some resemblance to an English walnut. On dividing it longitudinally with a small saw, I found it composed of concentric laminæ, thinner and harder near the surface, and its centre soft, of looser texture, and wearing a chrystalized appearance.

Pemberton says "the size of gall-stones, which have passed without destroying the patient, almost exceeds belief. I have in my possession the model of one, whose long diameter is two inches and a quarter, and whose short diameter is one inch and a quarter. The patient from whom this passed suffered for five months the most acute pain. From the magnitude of the stone, I should believe that ulceration (in consequence of inflammation) had taken place between the duct and duodenum, and that thus an aperture was made for the stone to pass into the intestines, as it is unlikely that the duct could admit of such distension."

What Dr Pemberton conjectured was verified in this case, as I am satisfied by a re-examination of the morbid parts, which I now have preserved.

For the consideration of those who may become Members of Legislatures.

[Communicated for the New-England Journal of Medicine and Surgery.]

GENTLEMEN,

SUPPOSE the human bones, or the more recent subject, should happen to fall into the hands of some one, whose duty might make it necessary to perform certain experiments upon them; and suppose such person should happen to know that those bones, or other remains of the human body, were procured cautiously, and with a view not to disturb the public graves, but illegally; should this knowledge alone be a reason why, if he uses them, he should be deemed guilty of a crime of a felonious nature, and of so high a grade, as to make it just, that he should be punished like a felon in Newgate prison, for ten years or less, and pay a heavy fine. Such it is believed must be the operation of a Law of Connecticut, passed in 1824.* The law in question seems to be predicated upon the mistaken idea, that the act of taking or removing a dead body secretly from the grave is theft. The propriety of this may well be doubted. For it is evident such body cannot be regarded as property that is and may be useful to every one, or like money that is easily transferable from one person to another, and useful to each possessor. Neither is it owned by any one. And the grave clothes, if taken, are property to which the former owner or owners have resigned all claim. For it is obvious that no further use of said property is intended. This act may or may not be a trespass, according to the circumstances of the case. It is admitted, however, that it is sometimes so foolishly and imprudently done, as to be the cause of producing great mischief and excitement; and the person who does it, should in such case be punished according to the damage done. He should be punished, however, for disturbing the public peace; not for injuring the dead body.

It would be difficult to show that the *policy of law* requires that the privately removing the dead body from the grave should be regarded in the same light as theft. For the indignation of the more ignorant part of the publick, and of the relatives of the diseased, even in the most civilized state of society, which is excited by the discovery of this act, is experimentally proved often to be great. This cause alone, *soon without the aid of law*, is abundantly sufficient, in general, to insure a sufficient degree of caution in the means made use of to obtain subjects. And no one, it is presumed, would pretend it was immoral to dissect the human body, provided it is done with correct motives, and so secretly as not to disturb the feelings of any one. The doing a thing secretly, can be no crime, unless the thing itself, is an improper one to be done.

The whole history of anatomy and surgery will show that the business of dissection is carried on extensively in every scientific country, and by men of the purest morals, and greatest humanity. And the history of general society will show, that this *very useful business* is managed with so much prudence, *that the peace of society is but seldom disturbed thereby.*

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* See the Law.

The contemplation had in the formation of the late law evidently was, that those who might find motives to wish to evade the law, would be very artful in effecting that object. But it should have been considered also that those motives are not those of a felon, arising from a wish to injure society, but grow out of motives of an entirely opposite character, and such as are commendable in the highest degree, namely, a wish to acquire the power of benefiting the living. It has been admitted, however, that such persons should be liable in damages for wantonly or even imprudently injuring the feelings of any one. The dead they cannot injure. Our whole conduct, and all our regulations and laws on this delicate subject, especially should be coolly, humanely, and prudently managed, having reference to the benefit, the rights, the feelings, and the associations of the living; for the dead, on their own account, require no protection. The truth is, our fellow feelings, and associations towards the living, continue to be exercised towards them, when dead. This is of no importance in any way as respects the dead, but is often a fruitful source of evil, as well as good, to the living. And men of the most cultivated minds seem not to be sufficiently aware of this, when they make laws on this subject. There is another truth which should not be forgotten; namely, those whose duty it may be to dissect the human body, have a right to claim the protection of law, as well as other citizens, provided they conduct their business properly.

BLACKSTONE.

Connecticut.

MISCELLANEOUS NOTICES.

Diagnostic between Irritation and Inflammation of the Mucous Membranes of the Bronchiæ.—M. NAUCHE has remarked that, in the natural state, or where there only exists an excess of irritation, the matters secreted by the different mucous membranes have always a well-marked acidity: while, on the other hand, if these membranes be inflamed, alterations of their vital properties supervene; the nature of the secretion is changed, and becomes alkaline. These two states are easily recognised by a morsel of paper tinged blue by turnsol. When the matter expectorated is acid, the paper is turned red; while it assumes a deeper blue, or is even changed from red to blue, if the matter be alkaline.

M. Nauche has examined the expectoration, with respect to its acid and alkaline character, in the diseases of the respiratory organs. He believes, from this inquiry, that they may be divided into matter produced by irritation,—and increased secretion of the mucous follicles which line the membrane of the air-passages,—and into matter, or expectoration, which results from their inflammation. He has observed that the white, mucous, frothy expectoration, which is frequently brought up in large quantities by persons in a state of agony, has always an acid character, when the air-passages have not been the seat of previous disease. This character is likewise found in the white, frothy expectoration which occurs during the whole continuance of pleurisy, whether acute or chronic; and at the commencement of pneumonia, when the matter expectorated is white, or even yellow. It is often lost in the course of this disease, and re-appears towards its decline. The acid expectoration is likewise found in emphysema of the lungs and scrophulous phthisis, when the tubercles are but little developed,—in the state called crude. It is evident, in all these cases, that the mucous membranes which furnish the expectoration are only in a state of increased excitement, and that they are in no degree inflamed. M. Nauche has likewise found acid expectoration in certain advanced cases of phthisis. He believes that this depended upon these matters being the product of an increased secretion of the mucous membrane lining the excavations formed by the tubercles.

The expectorated matters, on the contrary, are always alkaline in inflammation of the mucous membrane of the bronchiæ, and in all the cases designated by the names of acute and chronic colds, or mucous phthisis (*phthisis muqueuses.*) Although this expectoration is not regarded as purulent, it is nevertheless a kind of pus peculiar to inflammation of these membranes, and analogous to the purulent serosity which is furnished by serous membranes when in a state of inflammation.

The expectoration likewise becomes alkaline in peripneumony, when the inflammation of the pulmonary tissue communicates itself to that of the mucous membrane of the bronchiæ; and this secretion is the product of the inflammation of these two tissues.

The expectoration is likewise alkaline in phthisis pulmonalis, in the second or third stage, when the tubercles become broken down. It is usual, in such cases, to find the internal membrane of the lungs deeply altered.

It frequently happens, particularly among phthisical patients, that both these kinds of expectoration are to be found in the same vessel. That which results from an augmented excitement comes up most easily,—is white, frothy, and acid; the other is brought up with difficulty, is yellow, thick, and alkaline. In this disease, when the patient has only the former kind of expectoration, his life is often in the greatest danger.

Lond. Med. & Phys. Journal.

Hydrophobia.—Dr Capello, of Rome, in a Memoir read before the Academy dei Linæi, affirms that the hydrophobic poison, after its first transmission, loses the power of conveying the disease. This remark, already pointed out by Bader, is confirmed by repeated experiments made by Dr Capello, both upon dogs and other animals. A lap-dog and cat were both inoculated with the saliva of a dog, who died of *inoculated* hydrophobia: they both remained free from disease; and three years afterwards the lap-dog was again innoculated, from a dog who became rabid *spontaneously:* he then took the disease, and died.

An ox was bitten by a dog attacked with rabies; he became hydrophobic, and bit many other animals: all remained free from the affection. The dog that bit the ox also bit a child, who died about four months after, with all the symptoms of hydrophobia: with the saliva of this child a dog was inoculated, but the disease was not transmitted.

Dr Capello relates one more history in confirmation of this fact, and which is very strong, inasmuch as the animal, which was bit by another dog belonging to the same person, becoming hydrophobic on the fifty-first day, broke the chain with which he was fastened, and escaped into the street, where he bit many persons, (and the dogs of two persons who are named,) and finally disappeared among the ruins of the villa of Quintelius Varus. Not one of the persons so bitten, nor even of the dogs, had the slightest symptom of hydrophobia.

Dr Capello gives us no satisfactory account of the origin of the spontaneous hydrophobia, which he would endeavour to persuade his readers is caused by the violence of the venereal appetite in the canine species, when restrained from indulgence. He also informs us that he has not been able to verify the observations of Dr Marochetti, relative to the pustules under the tongue; and, on this point, he therefore agrees with the physicians of Wirtemberg, who, by the desire of the College of Medicine, were ordered to examine the tongues of those men and animals who were the subjects of the disease throughout that kingdom.—*Ibid.*

Effects of the Croton Oil.—Dr Fenoglio, of Turin, has published a series of experiments on the use of the above-mentioned oil; from which he draws the following conclusions:—

1st. That the effects of this oil are to produce a sense of burning in the fauces, slight pains in the belly, and a general sense of fatigue.

2d. That it may be looked upon as an antiphlogistic of no ordinary powers; but not to be administered where there exists any inflammatory action of the digestive canal.

3d. That it does not possess any diuretic property.

4th. That, generally speaking, in the doses usually administered, it is powerfully drastic.

5th. That, in doses of a drop, it does not produce the violent effects that have been by some attributed to it.

6th. That, where more numerous evacuations have been procured, other purgatives, or glysters, have assisted its action.

7th. That, given in the form of pill, the effect upon the mouth and fauces is avoided.

8th. That it should not be given in solution, as it appears thereby to be imperfect in its action.

So far Dr Fenoglio's experience extends. We have, immediately following, the result of experiments made in the clinical department of the University of Padua, communicated to us by Pietro Benvenuti, and which appear more in conformity with the experience of the English practitioner. The conclusions this latter gentleman has arrived at are the following:—

1st. That the Croton oil is the most violent of all drastic purgatives at present known.

2d. That this oil produces its effects without the medium of any vehicle (by mere contact.)

3d. That the irritation of the fauces produced by it, is always greatest when the oil is least diluted.

4th. That half a drop operates in a much greater degree of proportionate violence than a larger quantity.

5th. That the purgative effects are in an inverse ratio to the irritation produced upon the fauces.

6th. That it is possessed not only of an acrid, but of a caustic quality also.

7th and lastly. That, besides its action on the fauces and intestines, it appears to exert a power over the urinary apparatus, *diminishing* the quantity of urine; and, therefore, the Professor thinks that it may be given with every chance of success in cases of Diabetes mellitus.—*Ibid.*

On the Method of counteracting Uterine Hemorrhage, proposed by Dr Gooch.—Since the publication of Dr Gooch's paper, (12th volume of the Medico-Chirurgical Transactions,) on the Hemorrhage which sometimes follows the Expulsion of the Placenta and the Contraction of the Uterus, I have had an opportunity, (says Mr Crowfoot,) in three cases, of witnessing the good effects of the preventive treatment which he recommends.

Mrs G., in three previous labours, had suffered from a frightful hemorrhage, which followed the expulsion of the placenta, after an interval, varying in the different labours, of from five to twenty minutes, notwithstanding the uterus had actively contracted. This patient having been again pregnant, I determined to try strict antiphlogistic treatment for five or six weeks prior to her confinement. The consequence was, that she altogether escaped the hemorrhage.

Mrs A., a lady of sanguine temperament, but delicate constitution, in her two first labours had rather more than the usual discharge after the removal of the placenta. In her third labour, the placenta was expelled as usual, the uterus actively contracted, and no hemorrhage followed for at least twenty minutes, when a most appalling one burst forth, and was with difficulty restrained by the most prompt and continued treatment. In her fourth pregnancy, the antiphlogistic treatment was pursued as in the former case, and with the same satisfactory result.

In another patient, Mrs L., similar hemorrhages had occured in two previous labours: in a third pregnancy, the antiphlogistic treatment prevented this inconvenience in the following labour.

In none of these cases did the hemorrhage immediately follow the expulsion of the placenta; an interval of from five to twenty minutes intervened; and I therefore infer, that a degree of relaxation of the uterus preceded the hemorrhage, and was as essential as the existence of the phlogistic diathesis. We find that the only remedies upon which we can depend in these cases, are such as have a tendency to produce firmer contraction of the organ,—the sudden application of cold to the abdomen, steady pressure externally on the uterus, and the introduction of the hand into its cavity. Dr Gooch found that Le Roux's remedy could not be relied on; and the case which I detailed first, in which alarming hemorrhage took place, into an uterus distended by a seven-months' fœtus and its appendages, would indispose one to trust to the plugging the vagina as a means of restraining a bleeding into a dilatable organ.—*Edinburgh Med. & Surg. Journal.*

Tabular arrangement of Diseases of the Bones.—In a paper on the arrangement and description of the diseases of the bones by William Cumin, M. D. he proposes the following arrangement.

I. *Ostitis.* Inflammation of bone.

II. *Hyperostosis.* Morbidly increased deposition of osseous matter, without the formation of any circumscribed bony tumour.

III. *Osteo-apostema.* Suppuration within the osseous substance.

IV. *Caries.* Ulcer of a bone.

Species 1st. *C. Exedens.* Destructive ulcer of bone.

Species 2d. *C. Ossificans.* Ulcer of a bone, with deposition of new osseous substance, having a morbid and imperfect organization.

V. *Osteo-anabrosis.* Simple absorption or erosion of bone.

VI. *Osteo-necrosis.* Death of bone.

Species 1st. *Osteon. Simplex.* Simple loss of vitality.

Species 2d. *Osteon. Regenerans.* Loss of vitality, with subsequent reparative process.

VII. *Exostosis.* Distinct circumscribed tumour arising from bone, and consisting partly or wholly of osseous substance.

Species 1st. *Exost. Cellularis.* Tumour or bony crust, enclosing osseous partitions more or less perfect.

Species 2d. *Ex. Petrosa vel Laminata.* Tumour formed of craggy portions, or laminated excrescences of bone, intermixed with cartilage.

Species 3d. *Exost. Eburnea.* Osseous tumour, having the solidity and whiteness of ivory.

VIII. *Osteo-sarcoma.* Sarcomatous tumour, originating from the lining membrane of the longitudinal canals, or the cancelli of bone.

IX. *Osteo-malakia.* Softening of the bones.

Species 1st. *Osteom. Infantum.* The proportion of albuminous substance much increased. Cortex of the bone thickened, texture reticulated.

Species 2d. *Osteom. Adultorum.* Both the earthy and albuminous substance much diminished. Cortex greatly attenuated.

A tenth genus, under the designation *Fragilitas*, may perhaps by some be considered necessary, in order to complete the view of the diseases of bones; but the extreme facility with which bones are sometimes fractured, is symptomatic of several different morbid states, and therefore it cannot with propriety be admitted to constitute a separate genus of disease. 1st, Fragility of the bones is occasioned by the diminished proportion of albumen and superabundance of oil in the bones of the aged, as well as by the thinning of the osseous walls, which has been remarked to take place at that period of life. 2d, It occurs very frequently in *osteo-malakia*, both of the infant and adult, as a consequence of that disease. 3d, Fragility takes place in *osteo-sarcoma*, when the absorption of the bone has proceeded through a great part of its diameter. Several authors have asserted, that fragility of the bones occurs in connexion with cancer; but on this point my own experience enables me to say nothing; nor have I succeeded in obtaining any satisfactory information regarding it from surgical writers.

Edin. Med. Jour.

Progress of the Cholera Morbus from India to the Mediterranean and Caspian Seas. By Dr Rehman, *Aulic Counsellor and Physician to the Emperor of Russia, and Director-General of the Civil Medical Department of the Empire.—(Hufeland's Journal der practischen Heilkunde, June.)*—For the last seven years, the Cholera Morbus has been extending its dreadful ravages over the greater part of the south of Asia. After having scourged, during 1817, 1818, 1819, and 1820, nearly the whole of the East Indian provinces, it extended itself through Siam and China, as far as the Phillipine Islands, and visited most of the islands in the Indian Ocean, Java, and Ceylon, as well as the Isles of Bourbon and France. Within the last year, the disease took a northerly course. It reached in one direction to the shores of the Caspian Sea, and in another, as far as the Mediterranean, and made an apparent stand at Astrachan, and in the neighbourhood of ancient Antioch. From these points the Cholera Morbus has stretched its menacing arms towards Europe. But here the question naturally arises, How has this disease arrived from the banks of the Ganges and the Indus to the mouths of the Wolga and the Orontes?

In the summer of 1821, the cholera first made its appearance on the borders of the Persian Gulf, and, nearly at the same time, in Muscat, Bender-Abusher, and Bassora, after having raged, for the second time, during the earlier months of the year, at Bombay. According to all accounts, it does not appear to have reached the shores of the Persian Gulf by land; but it is generally believed, and particularly in Persia, that the disease broke out in the seaport and trading towns immediately after the arrival of ships from Bombay. In Muscat* and its environs, during the short space of a few weeks, in the hot weather, 60,000 of the subjects of the Prince Oman perished of this complaint. It then extended along the western coast, and destroyed several tribes of the Weckhabits, so that, in a letter which we have before us, the number of those who died in a few months, and not in a very populous district, is estimated at 125,000 persons. In Bassora and its neighbourhood 18,000 died, and in Bender-Abusher from 10,000 to 14,000. From these two places the disease extended in different directions—from Bender-Abusher to the north, along Schiraz—and from Bassora westward, along the Euphrates to Bagdad. We shall, in the first place, trace the progress of the disease from Bender-Abusher to Astracan, as it lies nearer to us, and is more interesting, because it appears to have been uninterrupted in its course.

After the disease had committed the most dreadful ravages during the months of June and July in 1821 about the Persian Gulf, it reached by the end of the next month Schiraz, the first place of importance towards the north, and which has constant intercourse with Abusher by means of the caravans. The disease raged in this place with such fury during the whole of September, that in the space of a few days, when the weather was extremely hot, 16,000 persons perished. Great apprehensions were entertained that the cholera would reach Ispahan, which is on the same meridian with Schiraz, and therefore, the governor-general of that place gave strict orders that the caravans from Schiraz should not pass through Ispahan, but take a more easterly route, and go through the town of Jesd. By this precaution Ispahan escaped from this malady; but towards the end of September it made its appearance in Jesd, and continued its ravages during the whole of October, during which period it swept off about 7000 of the inhabitants.

During the winter the complaint disappeared from Jesd; but at the beginning of 1822, it again broke out in this place, and extended itself in a northern direction, the course which the caravans take, visiting the large towns of Nain, Kashan, Koom, Kosbrun, Sava and Dain. Thence leaving Teheran to the right, which, however, it afterwards visited by the way of Killah, Nargand, &c., it reached Tauris towards the end of the summer, the usual place of residence of the heir apparent to the Persian throne, prince Abas Mirza. In all these places the disease made the most extensive ravages. It visited even the camp of the king, which was at that time situated near the Turkish frontiers, and also menaced Erivan with its presence. In the autumn (1822) it extended its course from Tauris to Korbin, where it disappeared at the end of autumn. At the same time it extended from Tauris to Ardebil, and the district of Kalkal, where the celebrated salt-mines are situated, thence into the province of Ghilan to the town of Reshd which is situated on the shores of the Caspian Sea, and lastly into the province of Mazanderan, where it principally appeared at Balfrusch. Here, in the course of November, it entirely subsided. However, in the middle of April last year, it broke out again in some parts of Mazanderan, which it had spared in the preceding year, and also in some villages in the province of Ghilan; thence it reached in May the province of Shirvan, which, since the last treaty with Persia, has been under the dominion of the Russian government.

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* The heat and dryness in Muscat are so excessive, and so constant, that the Persians call it *Dsche-henam*, i. e. *Hell!*

This is the course which the disease has taken in a northerly direction,—beginning from the Persian Gulf, it passed through Persia, and, in the course of two years, reached the borders of the Caspian Sea. But it has also taken a westerly direction in which it has already approached Europe. It will be remembered, that it was stated several times in the public journals, that the disease had appeared in the ruins of Aleppo, also in some parts of Syria, on the coasts of Egypt, and even, we are told, on the Island of Cyprus. The question is, How did it arrive so far? Take a map of those countries, and remark, that, in the year 1821, at the very time when it was extending from Bender-Abusher to Schiraz, it commenced its devastating course at Bassora, proceeded along the Tigris and Euphrates, and at the end of August arrived at Bagdad. Here, notwithstanding the doctrine of fatalism by which the Mahommedan is deluded, the disease spread terror and despair into every mind; and, after committing its dreadful ravages for two months in the town and its environs, it proceeded to other parts. The numbers of those who perished in Bagdad from this disease is estimated at more than 5000. It attacked also, at the same time, the Persian army, which was encamped in the neighbourhood of Bagdad, and destroyed more than 2000 men. It appeared also at Illah, which is situated on the ruins of ancient Babylon, and which carries on a constant intercourse with Bagdad. Its further progress towards the west remains, however, almost unknown; and it seems uncertain whether it extended from Bagdad, through the Syrian desert to Aleppo, which is the principal depository for the goods brought by land from the Persian Gulf, or, in a more northerly route, by the way of Mussal.

In the following year, 1822, it broke out in July at Mosul, at Merdin in August, at Diarbekir in September, at Orsa in October, and in November at Biri, Aintab and Aleppo, nearly at the same time. At the approach of the cold it disappeared. The number which was destroyed at all these places was considerable, excepting Aintab, where the loss was not great, and Aleppo, which escaped with the loss of 1000 only. In this course the disease has marched through the tract situated between the Persian Gulf and the Mediterranean; but in all cases it appears to follow the course which the caravans take.

On the 10th of June 1823, nearly at the same time as it appeared in the Russian province of Shirvan, it broke out, according to Berggreen's account (*Siehe Hamburger Börsenhalle vom* 18. *Februar* 1824), in the environs of Laodicea, and on the 20th of August in Antioch, where about 100 persons are said to have perished daily. Immediately after, it appeared to the east of these two towns, in the village of Sarkin, and also in Sissershorl, on the river Orontes, in the road to Laodicea, a few days journey from Aleppo. The contagion was also brought in July from Antioch to Swedie, where Mr Barker, the English Consul, has a country seat. It extended itself along the borders of the Mediterranean in two directions—the first along the mountains of *Sebal el Akra* (Mons Cassius), and the south-westerly shore; whilst in the second it followed the mountains to the north-west, between Seleukia and Alexandria, near which last place it seems to have made a stand.

The Arabic appellation for this disease is El-Houwa, *i. e.* the *Storm;* it is also called the Indian plague. It is a tradition in that country, that this very disease, or one of a similar nature, about 500 years ago, originated in India, extended itself over Egypt, Nubia, and Abyssinia, and finally disappeared in the deserts of Africa.

According to the above account, the disease has passed over 90° of longitude, and 66° of latitude. The Philippine Islands (125° east longitude from Greenwich) form the eastern, and the borders of Syria the north-western, boundary of this disease. The Mauritius (as far as is known) is the most southern, and Astrachan the most northern, point to which, up to the present, it has extended. The island lies in 20° south longitude, and Astrachan 46° north latitude. Thus the disease has, in one direction, crossed the equator, and approached the boundary of the southern tropics, and in another passed through the northern tropic into the temperate zone.—*Ibid.*

Effects of Belladonna in preventing the Communication of Scarlatina. (*Arch. Gén. de Méd. Juin* 1824. v. 270, *et Journ. Complément. Juin* 1824. xviii. 369.)—The alleged discovery of the anti-scarlatinous properties of Belladonna, (if we may be allowed to fabricate a name to designate a fact, which is rapidly gaining belief on the Continent), was made in 1807 by Hahnemann of Leipsick. A favourite doctrine of that writer, and one which has its admirers in Germany was, that diseases are to be combatted by remedies, the effects of which are similar to the symptoms of the diseases for which they are given. To this doctrine he gave the name of *homœopathia.* He had remarked that the belladonna when given in small doses produces heat and dryness in the throat, swelling of the submaxillary glands, and a cutaneous eruption, sometimes consisting of a mere efflorescence, sometimes composed also of papulæ like red miliaria; and his doctrine of the *homœopathia* led him to infer that this drug might prove a preservative against scarlatina, which produces symptoms essentially the same. It appears that the visionary hypotheses with which he overloaded his observations kept these statements long from public notice; until a severe epidemic of scarlatina began to lay waste various cities of Germany about ten years afterwards; and then the attention of physicians was attracted to the means of arresting its progress. The two Journals whose names are at the beginning of this article, supply us with extracts from the Memoirs of five German writers on the subject, and with an original Essay by Dr Koreff, Professor of the University of Berlin. From these we shall extract a short account of the facts, leaving our readers to judge for themselves of the credit they deserve, and hoping that they will put to the test of British experience a statement, which every one will allow to be of vast consequence in the practice of the healing art. Berndt of Custrin, who was the first to make a connected series of experiments, says, that in the epidemics of Scarlatina which prevailed throughout that city in 1818 and 1819, he used the Belladonna as a preservative in children under 15 years of age, and freely and continually exposed to the contagion; that of 195 cases fourteen only were infected; and that, when he afterwards used a stronger preparation of the drug, every one escaped the disease. Dusterberg, a physician of Warberg, found that every child who took the belladonna for a sufficient length of time before exposure, escaped; and that whenever he left a child in an infected family to the care of nature, which he frequently did, that there might be no deception, the child was invariably attacked with the disease, while the rest of the family who took the drug escaped it. Dr Behr of Bernberg states, that of 47 individuals who took the belladonna as a preservative, six only were attacked by the disease. Koreff, Professor at Berlin, affirms, from a very extensive and long-continued experience, that the most intimate intercourse may be kept up with patients affected with scarlatina, provided the belladonna be taken in the proper doses for eight or nine days before exposure, and be continued till the period of desquamation. Other statements to the same effect have been accumulated in the Memoirs alluded to; so that there is no want of authorities for the facts. The quantity given has generally been very small. The preparation employed was a solution of 3 grains of the extract in an ounce of *eau de cannelle;* and of this two or three drops were given twice a-day to a child under 12 months of age, one drop more for every year above that. In general no sensible effect is produced by it in such small doses; but sometimes it produces an eruption like that of scarlatina anginosa. Almost all the writers mentioned above agree, that even when it does not act as an absolute preventive, which generally arises from its having been taken for too short an interval before exposure, it nevertheless renders the attack much more mild, and if it has been taken for four or five days before exposure, the attack never proves fatal.—*Ibid.*

Case illustrating the Pathology of Cynanche Laryngea. (*Journ. Complémentaire, Juillet* 1824, xix. 2.)—A young man, who had recently recovered from a putrid fever, came under the charge of M. Bouillaud, for the following complaints:—Hoarseness of a month's standing, husky cough, copious expectoration, acute pain in the throat, a sense of suffocation on making a slight effort, small, quick, and frequent pulse. The head, [heart,] and lungs, when examined by the stethoscope, appeared healthy, with the exception of the lower part of the right lung, which was congested. Towards the close of the next day he became so anxious and restless, that he could not lie in bed. He inspired frequently, deeply, and with a peculiar hissing and rattling sound; the pulse was very small; and he was in momentary dread of suffocation. On the following morning the symptoms continued without abatement; and he lay with the head elevated and the neck stretched. Next day the symptoms of impending suffocation were still more urgent;

his countenance expressed great alarm, anxiety, and despair; he put his hand to his throat as if to remove something that strangled him; all the outward signs of gradual asphyxia succeeded, and he expired the following morning. An abscess was found at the posterior and lateral parts of the larynx, by which the cricoid cartilage was denuded. The whole crico-arytenoid muscles seemed as if they had been dissected, and were thickened, greenish, hard, and lardaceous; their nerves could not be discovered; and the arytenoid cartilages were confounded with the muscles, and their articulations with the cricoid cartilage destroyed. *The arytenoid muscles and their nerves were not affected.* The glottis was only three or four lines long. The trachea and bronchia were filled with reddish froth; the lining membrane of the former was white, of the latter, reddish brown; and the lungs were every where healthy, except the inferior part of the right lung, which was hepatised. This case interests us chiefly as affording an explanation of the symptoms of suffocation, and the cause of death in some obscure cases of cynanche laryngea. Death sometimes takes place in consequence of the swelling around the glottis obstructing the passage of the air, and sometimes from the inflammation affecting the trachea and lungs. But occasionally the lungs have been found free from inflammation, and the aperture of the glottis, notwithstanding the swelling of its lips, sufficiently large to admit air enough for supporting respiration. In such cases the symptoms of suffocation, and the subsequent mode of death, namely, by asphyxia, have been vaguely ascribed to spasm of the glottis. This explanation, however, may be justly questioned; for the spasmodic action of the muscles of the glottis in general would tend rather to dilate than to contract its opening. The appearances in the larynx of Bouillaud's patient completely explain the cause of suffocation in that case, and will suggest the probability of a similar cause existing for the symptoms in others. The muscles which dilate the rima glottidis were all more or less disintegrated, while their antagonists were quite healthy. We cannot take leave of his Essay without lamenting that the late laborious and valuable researches of the French pathologists, have advanced them so little in the treatment of diseases whose nature seems thoroughly known to them. We will venture to affirm, that the rawest practitioner in Britain would have been at no loss to decide, from the symptoms of the case narrated above, what was the precise nature of the disorder, and the only probable mode of cure. But the author contented himself with applying a blister to the throat, and prescribing edulcorated gum! In his comments on the case, he remarks, that during life it was impossible to determine its exact nature; that the cause, however, of all the symptoms, became manifest after death; and that the appearances found would suggest the propriety of tracheotomy in similar cases! And he adds, that the operation has been tried successfully in one case, which occurred in the wards of Fouquier at La Charitê. We were not prepared to expect, in a writer of reputation, such gross ignorance of British physic and surgery.—*Ibid.*

Sudden Death during an Operation.—A most melancholy event happened lately in the surgical practice of M. Dupuytren, which involves some curious physiological and surgical considerations. On the 19th November, 1822, a fine young woman (Alexandrine Poirier) came to the Hotel Dieu, for a tumour of some size, situated on the posterior and lateral part of the neck. From its hardness, renitency, and insensibility, M. Dupuytren ascertained that it was of a cellulo-fibrous nature, and proposed its removal, to which the young woman consented. The operation was performed on the 22d of November, with all the skill and dexterity of that celebrated surgeon. No arteries were cut that required the ligature, and consequently, there was very little hemorrhage. Neither were there any muscles or large nerves divided. Just, however, as he was proceeding to separate the last shreds of attachment, and turn the tumour out, he was surprised to hear a somewhat prolonged hissing noise (sifflement prolongé) similar to that produced by the re-entrance of air into a vessel from which it had been exhausted. The operator stood for an instant astonished, and observed, that, were it not for the distance of the knife from the air passage, he would have thought that he had made an opening into it. He had scarcely said the word, when the young woman cried out that she was dying, and instantaneously dropped down on the floor a lifeless corpse, to which all their efforts could not restore the slightest symptom of animation. This happened in the presence of nearly 400 spectators, and the body was examined next day, in the presence of full as many, with the most rigorous minuteness.—Every part of the body was carefully dissected; but there was not a particle of morbid structure any where to be found. An examination of the heart, however, disclosed the cause of the melancholy catastrophe. The right auricle was distended like a bladder with air, which rushed out when cut open, without any admixture of blood. Fluid blood was found in the other cavities of the heart, as also in the different vessels. Great quantities of air were found in all the vessels. There was no other unnatural appearance in any part of the body.

We have not the smallest doubt, that Dupuytren was perfectly correct in his conclusion, that air had rushed in through one of the veins of the neck, and thus caused instant death. It is, perhaps, the only case on record of the kind, and so unlikely to happen often, that it can be no serious objection to any operation on the neck or other part of the body. We think it is a pathological fact, however, which bears on the physiology of the circulation. It proves that the heart acts as a sucking as well as a forcing pump, otherwise air would never have passed from a cut vein in the neck down into the right chambers of the heart. It is highly probable, that, in consequence of the morbid state of the parts, the mouth of the cut vein had remained patulous, and thus readily admitted the air.

Medico-Chirurg. Review.

Amputation at the Hip Joint.—Several cases of this kind which have proved successful have been recorded within the last few months in the Journals—one by Professer Delpech of Montpelier, of which a full account is given in Johnson's Journal for January 1825—one by Sir Astley Cooper at Guy's hospital in London, and another by Dr Mott of New York, upon a boy whose thigh bone was diseased as far as the trochanter.

Dr Mott's operation for the extraction of an extra-uterine fœtus. The subject of this operation was a female about 34 years of age, in whose abdomen a child had remained two years and eleven months. The fœtus was in a perfect state, and of the size of a child of seven months old. It lay along the umbilicus upon the small intestines with the head to the left. Eleven hours after the operation the woman expired. She seemed to have perished from the severe irritation of the operation.

N. Y. Monthly Chronicle.

Influence of Vaccination upon the Mortality of Berlin.—M. Caspar has published a long paper, containing many curious details relative to the above subject; but we can do no more, at present, than give the result of his investigations.

1. The small-pox formerly carried off from the 12th to the 10th of the population.

2. Formerly at Berlin one out of twelve children born, died of the small-pox; now the deaths from the same cause are 1 in 116.

3. The diseases of children are more common than before

the introduction of vaccination, because the number of infants that survive is more considerable.

4. These diseases formerly destroyed 39 children out of every 100; now only 34 in the hundred die of these diseases, so that in the whole 51 children in 100 died formerly, and at present only 43.

5. Generally speaking, 1 inhabitant in 28 used to die annually, now there is only 1 death in 34. *Lon. Med. Phys. Jour.*

SELECTIONS.

On the Importance of the Study of Anatomy—with some additional Remarks.

[From the Westminster Review.]

THE basis of all medical and surgical knowledge is anatomy. Not a single step can be made either in medicine or surgery, considered either as an art or a science, without it. This should seem self-evident, and to need neither proof nor illustration; nevertheless as it is useful occasionally to contemplate the evidence of important truth, we shall show why it is that there can be no rational medicine, and no safe surgery, without a thorough knowledge of anatomy.

Disease, which it is the object of these arts to prevent and to cure, is denoted by disordered function: disordered function cannot be understood without a knowledge of healthy function; healthy function cannot be understood without a knowledge of structure; structure cannot be understood unless it be examined.

The organs on which all the important functions of the human body depend are concealed from the view. There is no possibility of ascertaining their situation and connections, much less their nature and operation, without inspecting the interior of this curious and complicated machine. The results of the mechanism are visible; the mechanism itself is concealed, and must be investigated to be perceived. The important operations of nature are seldom entirely hidden from the human eye; still less are they obtruded upon it, but over the most curious and wonderful operations of the animal economy so thick a veil is drawn, that they never could have been perceived without the most patient and minute research. The circulation of the blood, for example, never could have been discovered without dissection. Notwithstanding the partial knowledge of anatomy which must have been acquired by the accidents to which the human body is exposed, by attention to wounded men, by the observance of bodies killed by violence; by the huntsman in using his prey; by the priest in immolating his victims; by the augur in pursuing his divinations; by the slaughter of animals; by the dissection of brutes; and even occasionally by the dissection of the human body; century after century passed away, without a suspicion having been excited of the real functions of the two great systems of vessels, arteries and veins. It was not until the beginning of the 17th century, when anatomy was ardently cultivated, and had made considerable progress, that the valves of the veins and of the heart were discovered, and subsequently that the great Harvey, the pupil of the anatomist who discovered the latter, by inspecting the structure of these valves; by contemplating their disposition; by reasoning upon their use, was led to suspect the course of the blood, and afterwards to demonstrate it. Several systems of vessels in which the most important functions of animal life are carried on;—the absorbent system, for example, and even that portion of it which receives the food after it is digested, and which conveys it into the blood, are invisible to the naked eye, except under peculiar circumstances: whence it must be evident, not only that the interior of the human body must be laid open, in order that its organs may be seen; but that these organs must be minutely and patiently dissected, in order that their structure may be understood.

The most important diseases have their seat in the internal organs of the body; an accurate acquaintance with their situation is, therefore, absolutely necessary, in order to ascertain the seats of disease; but for the reasons already assigned, their situation cannot be learnt without the study of anatomy. In several regions, organs the most different in structure and function are placed close to each other. In what is termed the epigastric region, for example, are situated the stomach, the liver, the gall bladder, the first portion of the small intestine (the duodenum) and a portion of the large intestine (the colon); each of these organs is essentially different in structure and in use, and is liable to distinct diseases. Diseases the most diversified, therefore, requiring the most opposite treatment, may exist in the same region of the body; the discrimination of which is absolutely impossible, without the knowledge which the study of anatomy alone can impart.

The seat of pain is often at a great distance from that of the affected organ. In disease of the liver, pain is generally felt at the top of the right shoulder. The right phrenic nerve sends a branch to the liver: the third cervical nerve, from which the phrenic arises, distributes numerous branches to the neighbourhood of the shoulder: thus is established a nervous communication between the shoulder and the liver. This is a fact which nothing but anatomy could teach, and affords the explanation of a symptom which nothing but anatomy could give. The knowledge of it would infallibly correct a mistake into which a person who is ignorant of it would be sure to fall: in fact, persons ignorant of it do constantly commit error. We have known several instances in which organic disease of the liver has been considered, and treated as rheumatism of the shoulder. In each of these cases, disease in a most important organ might have been allowed to steal on insidiously until it became incurable: while a person acquainted with anatomy, would have detected it at once, and cured it without difficulty. Many cases have occurred of persons who have been supposed to labour under disease of the liver, and who have been treated accordingly; on examination after death, the liver has been found perfectly healthy, but there has been discovered extensive disease of the brain. Disease of the liver is often mistaken for disease of the lungs: on the other hand, the lungs have been found full of ulcers, when they were supposed to have been perfectly sound, and when every symptom was referred to disease of the liver. Persons are constantly attacked with convulsions—children especially; convulsions are spasms: spasms, of course, are to be treated by antispasmodics. This is the notion amongst people ignorant of medicine; it is the notion amongst old medical men: it is the notion amongst half-educated young ones. All this time these convulsions are merely a symptom; that symptom depends upon, and denotes, most important disease in the brain: the only chance of saving life, is the prompt and vigorous application of proper remedies to the brain; but the practitioner whose mind is occupied with the symptom, and who prescribes antispasmodics, not only loses the time in which alone any thing can be done to snatch the victim from death, but by his remedies absolutely adds fuel to the flame which is consuming his patient. In disease of the hip-joint, pain is felt, not in the hip, but, in the early stage of the disease, at the knee. This also depends on nervous communication. The most dreadful consequences daily occur from an ignorance of this single fact. In all these cases error is inevitable, without a knowledge of anatomy: it is scarcely possible with it: in all these cases error is fatal; in all these cases anatomy alone can prevent the error—anatomy alone can correct it. Experience, so far from leading to its detection, would only establish it in men's minds, and render its removal impossible. What is called experience is of no manner of use to an ignorant and unreflecting practitioner. In nothing does the adage, that it is the wise only who profit by experience, receive so complete an illustration as in medicine. A man who is ignorant of certain principles, and who is incapable of reasoning in a certain manner, may have daily before him for fifty years cases affording the most complete evidence of their truth, and of the importance of the deduction to which they lead, without observing the one, or deducing the other. Hence the most profoundly ignorant of medicine are often the oldest members of the profession, and those who have had the most extensive practice. A medical education, founded on a knowledge of anatomy, is, therefore, not only indispensable to prevent the most fatal errors, but to enable a person to obtain advantage from those sources of improvement which extensive practice may open to him.

To the surgeon, anatomy is eminently what Bacon has so beautifully said knowledge in general is: it is power—it is power to lessen pain, to save life, and to eradicate diseases, which, without its aid, would be incurable and fatal. It is impossible to convey to the reader a clear conception of this truth, without a reference to particular cases; and the subject is one of such extreme importance, that it may be worth while to direct the attention for a moment to two or three of the capital diseases which the surgeon is daily called upon to treat. Aneurism, for example, is a disease of an artery, and consists of a preternatural dilatation of its coats. This dilatation arises from debility of the vessel, whence unable to resist the impetus of the blood, it yields, and is dilated into a sac. When once the disease is induced, it commonly goes on to increase with a steady and uninterrupted progress, until at last it suddenly bursts, and the patient expires instantaneously from loss of blood. When left to itself, it almost uniformly proves fatal in this manner; yet before the time of Galen no notice was taken of this terrible malady. The ancients, indeed, who believed that the arteries were air tubes, could not possibly have conceived of the existence of an aneurism. Were the number of individuals in Europe, who are now annually cured of aneurism, by the interference of art, to be assumed as the basis of a calculation of the number of persons who must have perished by this disease, from the beginning of the world to the time of Galen, it would convey some conception of the extent to which anatomical knowledge is the means of saving human life.

The only way in which it is possible to cure this disease, is, to produce an obliteration of the cavity of the artery. This is the object of the operation. The diseased artery is exposed, and a ligature is passed around it, above the dilatation, by means of which the blood is prevented from flowing into the sac, and inflammation is excited in the vessel; in consequence of which its sides adhere together, and its cavity becomes obliterated.

There is nothing in surgery of more importance than the proper treatment of hemorrhage. Of the confusion and terror occasioned by the sight of a human being, from whom the blood is gushing in torrents, and whose condition none of the spectators is able to relieve, no one can form an adequate conception, but those who have witnessed it. In all such cases there is one thing proper to be done, the prompt performance of which is generally as certainly successful, as the neglect of it is inevitably fatal. It is impossible to conceive of a more terrible situation than that of a medical man who knows not what to do on such an emergency. He is confused; he hesitates: while he is deciding what measures to adopt, the patient expires: he can never think of that man's death without horror, for he is conscious that, but for his ignorance he might have averted his patient's fate. The ancient surgeons were constantly placed in this situation, and the dread inspired by it retarded the progress of surgery more than all other causes put together. Not only were they terrified from interfering with the most painful and destructive diseases, which experience has proved to be capable of safe and easy removal, but they were afraid to cut even the most trivial tumour. When they ventured to remove a part, they attempted it only by means of the ligature, or by the application of burning irons. When they determined to amputate, they never thought of doing so, until the limb had mortified, and the dead had separated from the living parts; for they were absolutely afraid to cut into the living flesh. They had no means of stopping hemorrhage, but by the application of astringents to the bleeding vessels, remedies which were inert; or of burning irons, or boiling turpentine, expedients which were not only inert but cruel. Surgeons now know that the grand means of stopping hemorrhage is compression of the bleeding vessel. If pressure be made on the trunk of an artery, though blood be flowing from a thousand branches given off from it, the bleeding will cease. Should the situation of the artery be such as to allow of effectual external pressure, nothing further is requisite: the pressure being applied, the bleeding is stopped at once: should the situation of the vessel place it beyond the reach of external pressure, it is necessary to cut down upon it, and to secure it by the application of a ligature. Parè may be pardoned for supposing that he was led to the discovery of this invaluable remedy by inspiration of the Deity. By means of it the most formidable operations may be undertaken with the utmost confidence, because the wounded vessels can be secured the moment they are cut: by the same means the most frightful hemorrhages may be effectually stopped: and even when the bleeding is so violent as to threaten immediate death, it may often be averted by the simple expedient of placing the finger upon the wounded vessel, until there is time to tie it. But it is obvious that none of these expedients can be employed, and that these bleedings can neither be checked at the moment. nor permanently stopped, without such a knowledge of the course of the trunks and branches of vessels, as can be acquired only by the study of anatomy.

The success of amputation is closely connected with the knowledge of the means of stopping hemorrhage. Not to amputate, is often to abandon the patient to a certain and miserable death. And all the surgeon formerly did, was to watch the progress of that death: he had no power to stop or even to retard it. The fate of Sir Philip Sidney is a melancholy illustration of this truth. This noble-minded man, the light and glory of his age, was cut off in the bloom of manhood, and the midst of his usefulness, by the wound of a musket bullet in his left leg, a little above the knee, " when extraction of the ball, or amputation of the limb," says his biographer, " would have saved his inestimable life: but the surgeons and physicians were unwilling to practice the one, and knew not how to perform the other. He was variously tormented by a number of surgeons and physicians for three weeks." Amputation indeed was never attempted except where mortification had itself half performed the operation. The just apprehension of an hemorrhage which there was no adequate means of stopping, checked the hand of the boldest surgeon, and quailed the courage of the most daring patient—and if ever the operation was resorted to, it almost always proved fatal: the patient generally expired, according to the expression of Celsus, "*in ipso opere.*" How could it be otherwise? The surgeon cut through the flesh of his patient with a red hot knife: this was his only means of stopping the bleeding: by this expedient he sought to convert the whole surface of the stump into an eschar: but this operation, painful in its execution, and terrible in its consequences, when it even appeared to succeed, succeeded only for a few days; for the bleeding generally returned and proved fatal as soon as the sloughs or dead parts became loose. Plunging the stump into boiling oil, into boiling turpentine, into boiling pitch, for all these means were used, was attended with no happier result, and after unspeakable suffering, almost every patient perished. In the manner in which amputation is performed at present, not more than one person in twenty loses his life in consequence of the operation, even taking into the account all the cases in which it is practised in hospitals. In private practice, where many circumstances favour its success, it is computed that 95 persons out of 100 recover from it, when it is performed at a proper time, and in a proper manner. It seems impossible to exhibit a more striking illustration of the great value of anatomical knowledge.

Half a century ago there was in Scotland no difficulty in obtaining the subjects which were necessary to supply the schools of anatomy. The consequence was, that medicine and surgery suddenly assumed new life—started from the torpor in which they had been spell-bound—and made an immediate, and rapid, and brilliant progress. The new seminaries constantly sent into the world men of the most splendid abilities, at once demonstrating the excellence of the schools in which they were educated, and rendering them illustrious. Pupils flocked to them from all quarters of the globe, and they essentially contributed to that advancement of science which the present age has witnessed. Fortunately, there is in Great Britain no custom, no superstition, no law, and we may add, no prejudice against anatomy itself. There is even a general conviction of its necessity; there may be a feeling that it is a repulsive employment, but it is commonly acknowledged that it must not be neglected. The opposition which is made, is made not against anatomy, but against the practice of exhumation. So long as no other means of procuring bodies for dissection are provided, it must be tolerated; but in itself, it is alike odious to the ignorant and the enlightened, to the most uncultivated and the most refined.

We expected better things of America. We cannot express our astonishment and indignation, when we found that the state of New York has actually made it felony to remove a dead body from the place of sepulture for the purpose of dissection, without providing in any other mode for the schools of anatomy. This is worse than any thing that exists in any other part of the world.

All the medical schools on the continent are supplied with subjects by public authority.

We have obtained from a friend in Paris, a gentleman who is at the head of the anatomical department in that city, the following account of the manner in which the schools of anatomy are supplied. It is stated; 1. That the faculty of medicine at Paris is authorized to take from the civil hospitals, from the prisons, and from the dépôts of mendicity, the bodies that are necessary for teaching anatomy. 2. That a gratuity of eight-pence is given to the attendants in the hospitals for each body. 3. That upon the foundation by the National Convention, of schools of health, the statutes of their foundation declare, that the subjects necessary for the schools of anatomy shall be taken from the hospitals, and that since this period, the council of hospitals and the prefect of police, have always permitted the practice. 4. That M. Breschet, chief of the anatomical department of the faculty of Paris, sends a carriage daily to the different hospitals, which brings back the necessary number of bodies: that this number has sometimes amounted to 2000 per annum, for the faculty only, without reckoning those used in L' Hôpital de la Pitié, but that since the general attention which has recently been bestowed upon pathologic anatomy, numbers of bodies are opened in the civil and military hospitals, and that the faculty seldom obtain more than 1000 or 1200. 5. That besides the dissections by the faculty of medicine, and those pursued in L' Hôpital de la Pitié, theatres of anatomy are opened in all the great hospitals for the pupils of those establishments: that in these institutions anatomy is carefully taught, and that pupils have all the facilities for dissection that can be desired.

6. That after dissection, the bodies are wrapt in cloths, and carried to the neighbouring cemetery, where they are received for ten-pence. 7. That the practice of exhumation is abolished: that there are insurmountable obstacles to the return to that system, and that bodies are never taken from burial grounds, without an order for exhumation, which is given only when the tribunals require it for the purpose of medico-legal investigations. 8. That though the people have an aversion to the operations of dissection, yet they never make any opposition to them, provided respect be paid to the laws of decency and salubrity, on account of the deep conviction that prevails of their utility. 9. That the relatives of the deceased seldom or never oppose the opening of any body, if the physicians desire it. That all the medical students in France, with scarcely any exception, dissect, and that that physician or surgeon who is not acquainted with anatomy, is universally regarded as the most ignorant of men.

ADDITIONAL REMARKS.

It is surprizing that a country, so enlightened as the United States, should nourish prejudices no longer tolerated on the continent of Europe. Most of the Legislatures of this country have enacted laws to prevent the exhumation of bodies, without providing any other way for furnishing instruction to students in the medical profession. Yet it is not to be presumed, that the legislators desired to have physicians kept in ignorance of the structure of the human body. They no doubt expected, either that medical students would obtain subjects by stealth, or that they would resort to distant places for instruction. But it is obvious that no such expectations should be indulged. If the practice is useful, it ought not to be prohibited; if otherwise, it should be suspended equally throughout the civilized world.—The only rational argument for a law against dissections is, that this practice tends to excite anxiety in the living, lest the remains of their departed friends should be exposed to view. Such an anxiety is natural and cannot be rooted from the minds of men. But there are to be found in every civilized society, multitudes brought to an untimely grave by their own vices, who leave not a single individual to mourn their loss or feel an interest in their remains. Is it not better that such as these, (and their number is more than sufficient,) should be legally employed to teach the structure of man, than that the whole of society should be kept in alarm on the one side, or the whole medical profession in fatal ignorance on the other?

Many persons seem to entertain an opinion that a knowledge of anatomy may be gained by looking at preparations, or imitations of the body in *wax;* or at least by seeing a body opened, on some occasion. This is a very great and injurious error. Would any judicious person contract to have a house built by a mechanic, who had never seen any thing but a wax model of a house, who had never handled an ax nor a hammer? Would you employ a man to repair the delicate machinery of a watch, who had never examined the wheels and springs, or even had never held a watch in his hand? An individual, guilty of this folly would come near to be charged with insanity. But surely the organs of man form an apparatus much more delicate, and more difficult to comprehend, than all the machineries on the globe; and surely it would be a very high degree of insanity to trust any one to repair this apparatus, who had never himself examined and touched the thousand wheels, and springs, and balances, or observed their nice adjustment to each other. To be plain, it is absolutely necessary that every physician and surgeon should, by personal examination, and by close industry, obtain a most exact knowledge of the situation and relation of the innumerable veins, arteries, nerves, tendons, and other parts. If he has not this knowledge, when he comes to operate on the living body, he must be continually in danger of maiming those he wishes to restore, and of destroying those he desires to save. Does it not follow that every wise and honest man is called on to exert his influence to organize some system, by which anatomy can be learnt without violation of the laws, and without our citizens being sent at a vast expense into foreign countries?* Is it not time that the voice of the intelligent community should be raised against the absurdity of requiring from the medical profession a knowledge of anatomy, and at the same time exercising the most active means to prevent its acquisition?

Observations on Curvatures of the Spine. By JAMES MACARTNEY, M.D. M.R.I.A. F.R.S. Professor of Anatomy and Surgery in the University of Dublin, &c. &c.

[From the London Medical and Physical Journal.]

DISTORTION of the spinal column may arise from three causes. The first is that peculiar disease, which, terminating in the ulceration of the bodies of the vertebræ, necessarily induces an abrupt and very evident curvature; or, more properly, an angular figure of the spine. The second is that state of the bones, in which, from a deficiency of earthy matter in their composition, they are incapable of preserving their natural form; but bend or diminish under the operation of pressure. The spine, in those circumstances, will exhibit very different degrees of curvature, in proportion to the softness of the bones. In some persons, the deformity may be very slight; but, in others, there may be several very considerable lateral flexures of the spine. The third cause of distorted spine is the feebleness of those muscles which are employed in maintaining the erect position of the body. The tendency of a weakened state of the muscles to augment the more serious kinds of curvature, and to induce, even without a softened condition of the bones, an evident distortion of the back, does not appear to have yet received sufficient consideration, either from medical men, or from those whose interest it is early to notice, and prevent, deformity in young people.

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* The number of medical students in Boston the last season was about one hundred and thirty. If anatomy could not be learnt at home more than one hundred of these students would remain ignorant, for want of means to go to foreign countries. What miseries would their ignorance produce?

Slight curvatures are too often neglected; and hence, the wrong direction being given to the spinal column of bones, a serious and permanent distortion is apt to be subsequently established during a period of ill health, or by confinement to some one attitude from peculiar studies or occupation.

Slight curvatures of the spine are sometimes also disregarded, under the erroneous supposition that they will afterwards be concealed by modes of dress. No means, however artful or ingenious, will serve to disguise any distortion of the spine so well, that its injurious effects on the whole figure will not be felt, although the cause of the disagreeable appearance may not be known. A perfectly straight spine communicates to the motions, not only of the trunk, but of the extremities, a facility and grace which secretly and irresistibly influence our judgment of the figure, in the same manner as the countenance, sooner or later, determines our opinion of the face.

Spinal curvature is so much more frequent in females than men, that it might, with great reason, be considered as a complaint peculiar to the sex.

These circumstances render it highly necessary to watch and prevent every deviation from the natural form of the back in growing girls.

The progress of spinal curvature, where the other bones do not exhibit an undue flexure from softness, is very insidious. Distortion may exist for a considerable time, without being known. Parents are usually the last to notice it. Before there is any perceptible deformity, the young person may be observed to avoid, when at rest, the erect position of the body, by reclining on her companions, or against any near object; or will be seen to prefer some particular position, in which the weight of the head is thrown off the middle line of the body. In leaning, also, to write or draw, one side will be often favoured more than the other; and no admonition will be sufficient to check the disposition to seek rest for the spine.

The first appearance of deformity is usually an unequal projection of the shoulder-blades, which is supposed to be a defect in the situation of the scapula itself. Every degree of lateral curvature in the spine causes a corresponding prominence of the ribs, on the side to which the vertebræ are bent; and this again produces the eminence of the shoulder-blade on the same side.

In examining the external appearance of the spine, the person should be made to sit, for some time, with the body erect, in order to produce a degree of fatigue; when, if there be any tendency to lateral curvature, it will be detected by the spine resting itself by inclining towards the side, rather than forwards. The degree of curvature may be ascertained by tracing the projection of the spinous processes along the back, the situation of each of which should be marked with ink for future instruction.

In place of the lateral curvature, it sometimes happens that the natural S-like flexures of the spine are increased, so as to produce a degree of deformity. This is particularly to be observed with respect to the dorsal flexure of the spine, in children of weakly constitutions, whether male or female. The stooping of the shoulders, which marks the approach of old age, is also to be accounted for by the diminished strength of the muscles of the back. I have known but two cases, in which the natural backward flexure of the loins was increased, so as to amount to distortion.

When curvature of the spine has existed for any length of time, the bodies of the vertebræ which are concerned conform to the wrong inclination the spine has assumed. They are rendered thin, on one side, by absorption; whilst the other side preserves, or in some places exceeds, its natural thickness. When any considerable curvature has existed for a length of time, it necessarily induces a second in an opposite direction of some other part of the spine; and this again often gives rise to a third, in the direction of the first.

The means which are most commonly supposed to be necessary for avoiding deformities of the spine, are, I believe, those which have the greatest share in producing the usual spinal curvature. I allude to the attempts which are made to oblige young people to maintain the body immoveably in the erect posture; and to the restraint which is imposed on the development of the trunk, and the exercise of its muscles, by the early use of stays.

It may not be improper to state some physiological principles, on which the above opinion is founded.

It is a well-known law of muscular action, that it cannot be maintained without intervals of repose. No determination will enable a person to hold the arm, in the extended position, more than a few minutes. The sensation of fatigue is more intolerable than the greatest pain. We have frequent opportunities of seeing this exemplified during surgical operations.

It is generally acknowledged, that muscles are strengthened by being exercised; but the difference between the ordinary actions of muscles, and those attended with effort, has been overlooked. The bulk and strength of muscles are not increased by the customary actions, although ever so often repeated; while exertion of muscles beyond their habitual operations, even with long intervals of rest, will augment their magnitude and power to an extent that it is difficult to limit. This law of muscular action applies equally to the voluntary and involuntary muscles. The heart, the diaphragm, and the muscles so constantly employed in speech, in the motions of the eyes and lips, gain no additional bulk during life, unless exerted to an unusual degree.

As examples of a different kind, I may mention the enormous bulk the anterior muscles of the thigh arrive at in old stage-dancers, and the great strength the muscular parts of internal organs acquire, when there exists any obstruction to the expulsion of their contents.

A most extraordinary example of the last kind came under my knowledge some months ago, in which the left ventricle of the heart, in consequence of a diseased state of the aortic semilunar valves, had attained a degree of power, by the constant efforts it had to make, so disproportionate to the strength of the arteries, that the smaller branches of the latter were ruptured in several parts of the body, and coagula of blood formed, especially in the substance of the liver, and behind the peritoneum. The tunic of the liver at length gave way, and the patient died, from the quantity of blood that was shed into the cavity of the abdomen.

Another law of muscular action deserves to be noticed. Muscles lose power and bulk by disuse; but what would be disuse in one case, would not constitute it in another; or, in different words, in proportion to the frequency with which a muscle is intended to act, the necessity for its exercise exists, in order to prevent its degeneracy. There are some muscles in the human body, which are rarely put into full action. In animals we have examples of muscles which are only intended to be employed on particular occasions, that may never occur. Such muscles do not decline from disuse; whilst those that are provided for constant employment cannot remain at rest, without sustaining great diminution of their bulk and power.

Now, if we apply the preceding principles to the muscles attached to the spinal column, the injurious effects of exhausting their strength, by attempting to maintain any one permanent attitude of the body; of restraining their ever-varying motions; or of substituting, for their natural support to the bones of the spine, the artificial one of stays, must be sufficiently obvious.

Experience appears to accord exactly with theory on this subject. We find that those distortions of the back which are in a degree almost universal amongst women of the better ranks of life, rarely occur in the other sex, who do not employ an external support to the spine; that they are equally rare in females who have never worn stays; and that those women who have been early accustomed to carry burthens on the head, are quite remarkable for the straightness of the spine, and correctness of the form of the shoulders.

I might add, that the neck, of which the motions are unconstrained by modes of dress, is scarcely ever distorted; although the weight of the head is chiefly borne by this portion of the spine.

As far as I have had the means of judging, or of collecting information from others, these remarks are equally applicable to the inhabitants of other countries, as to those of Ireland.

Besides the longitudinal muscles which are chiefly employed in erecting the spine, the flat muscles, which execute the rotatory motions of the shoulder-blade, are often not fully developed, from want of being exerted; the consequence of which is, that the weight of the upper extremity constantly tends to bring it downwards and forwards, producing too great a roundness of the shoulders, and a projection or constant elevation from the ribs of the posterior edge of the shoulder-blade.

If it came within the scope of this Paper, I could show many evil effects on the shape of the whole female bust, from external constraint. It is sufficient to state at present, that I have found those women, and only those, who never wore any other than loose vestments, to possess the form and proportions which are displayed in the most beautiful of the antique statues.

In seeking a remedy for distortions of the spine, it is not unnatural to place great reliance on different kinds of machinery. The operation of bandages and of artificial supports would appear, at first, to be very obvious and intelligible. The application, however, of mechanic force or pressure to the living body, with the view of rectifying deformities, requires the greatest care, discretion, and knowledge, of the vital properties of the different tissues engaged. It is too often entrusted to the judgment of mechanics, who construct and sell surgical apparatus, and thereby gain a certain degree of experience, undirected by any principles; a species of knowledge, which is always dangerous in those who have to manage the various and complicated powers of the living system.

It would be departing from the plan of this Paper, to enter into the merits or faults of various mechanical contrivances, which have been devised for correcting deformities of the trunk. The principle, however, on which they should be alone constructed and applied, may be stated to be that of removing weight and pressure from parts, which could not be enabled, by other means, to sustain the operation of these mechanic powers. All instruments have injurious effects, as far as they limit or interrupt the natural actions of the muscles. It is by muscular action that we not only move, but sustain, any one position of the body. The application of a splint to a broken leg is unavoidable; but, if the instrument were continued to be worn, it would ultimately render the limb useless, by destroying the power of its muscles. Nature, indeed, sometimes adds elastic power to muscular, for the purpose of aiding and relieving the latter. This advantage is provided by the elastic ligaments of the spine in the human body, and still more so by those of the heavy-headed quadrupeds. If such a combination of power could be imitated by art, it would, no doubt, prove highly useful; but nothing of the kind has yet been attempted.

Mechanic motion and vital action are so different in their laws and nature, that it becomes necessary to make the former subordinate to the latter in the living body. I recollect but one instance in the structure of animals, where nature has substituted the one for the other: it is the joint of the tibia with the metatarsus in the stork, in which there is a mechanical contrivance for allowing the animal to rest, while standing on one leg, without any muscular effort.*

External machinery cannot be affixed to the body without in itself producing pressure somewhere. This may be well illustrated by the use of monitors and bandages for drawing the shoulders back, and, as it is ignorantly supposed, for opening the chest.

When these instruments leave any permanent effect, it is a hurtful one. The muscles of the scapula are rendered weak by disuse; the convexity of the superior ribs, on which the breadth and expansion of the chest depend, is diminished; and the anterior part of the ribs and sternum are thrown forwards, causing that shape which is known under the name of *hen-breasted*.

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* DUMERIL and CUVIER have noticed this mechanism, but have unaccountably described it as existing in the joint of the knee.

I have known several instances in which worse consequences followed this lateral compression of the chest in young women; such as difficult breathing and altered function of the skin, impaired powers of digestion, and great emaciation, in persons who had previously enjoyed robust health.

When it becomes necessary to relieve the spine from the weight of the superior parts of the body and the head, until by proper medical treatment the strength be sufficiently restored, I prefer the mode of resting on a flat surface, or, what is more comfortable, a gently-inclined plane, to any species of machine or bandage that has yet been invented. I think, however, that the effects of the recumbent posture are not always understood, and are sometimes over-rated. There appears to be no necessity for enjoining rest, as is usually done. On the contrary, the patient should rather be encouraged to exercise the spinal muscles by rolling about, and moving the arms and legs at pleasure; for which purpose a large platform, stuffed with wool, or a mattress, on which children can have their toys and plays with their companions, is preferable to a sofa or plain board, which are most frequently employed.*

The recumbent position is sometimes resorted to as the sole means of curing, or of preventing, curved spine. In several celebrated boarding-schools in London, it is used indiscriminately for all species and degrees of distortion; and, in some seminaries, all the girls are condemned to get their lessons, during so many hours every day, in the supine posture, with the view of preventing the occurrence of deformity. It appears to me more than unnecessary to confine healthy girls to the recumbent position; yet too much caution cannot be used to prevent children leaning uniformly to one side, in the act of writing, drawing, &c.—more especially if they be weakly, or if they seem to prefer that particular position.†

The advantages from exercising the spinal muscles in various positions of the body, should never be lost sight of; both as the means of preventing and of curing curvature, when the erect position can be safely sustained. In some cases, where the curvature has been slight, the persons very young, and the general health good, I have succeeded in restoring the natural form, merely by liberating the body from all constraint of stays or monitors, and permitting as much exercise to be taken as could be borne without fatigue.

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* I do not apply these observations to curvature from carious or ulcerated vertebræ, nor do I intend to enter into the consideration of that disease at present; there being no difference of opinion with medical men, respecting the propriety of treating it by rest and external stimulation.

† It occasionally happens that strong and labouring people acquire some lateral inclination of the body, and a projection of the shoulder-blade, in consequence of employing one hand almost exclusively in their work. I have observed, in these cases, that the shoulder which is the least exercised, is the one that stands out, whilst the other is apt to be peculiarly well formed; a fact which corroborates the principles laid down in the preceding part of this Paper, and suggests the propriety of teaching young people, as much as possible, to become ambi-dextrous.

Balancing any object, however light, on the head, has great efficacy in rectifying the shape of the spine. It is also readily adopted, as a pastime, by young people. In some instances of spinal curvature, where there was not a softened state of the bones, I have tried, with the best effects, exerting the muscles of the back, by the carriage of a bag of sand on the head; employing, at first, short periods of time for the exercise, and allowing rest in the intervals, in the recumbent posture; and, as the strength increased, repeating the exertion more frequently, and continuing it longer.

I have every reason to believe that this treatment, if employed with proper caution, will be always useful in cases of curvature from weakness; and, if practised with assiduity during early youth, I am persuaded would be the best means of preventing distortion.

The means which are most beneficial where merely the shoulders are round and prominent, are skipping with a rope, and the use of the dumb-bells; particularly in the action of carrying them backwards, which exerts the flat muscles that lie between the shoulder-blades and the spine.

I shall conclude by observing, that in all cases where a curvature of the spine, from a softened state of the bones, is apprehended or has taken place, every endeavour must be made to improve the health and strength, by a purer air, tonic medicines, and the cold bath; without which, machinery and rest will be useless, and exercise hurtful.

Some situations are much more productive of a disposition to curved spine than others. In certain districts of England and Holland, it is found to prevail. In the neighbourhood of Leyden, I observed great deformity of the spine to be almost universal with the women, and to exist even frequently in men. Damp and low situations would seem to have a peculiar tendency to induce a softened state of the bones.

With respect to medicines, it is generally known that preparations of iron are the best tonics in this disease. In the employment of the cold bath, I have found great advantage from having it used in the manner of affusion; not only in cases of weak spine, but whenever the object was to restore strength, and increase the activity of the circulation. I have also employed the affusion of tepid water, with very marked benefit, in cases where, either on account of the season or other circumstances, the dashing of cold water over the body would have produced too great a shock.

If the person be young, and the curvature not of very long standing, although it may have produced great deformity, there is no reason to despair of a perfect recovery. As long as the growth of the body is going on, there is a considerable tendency in all the parts to return to their destined form and uses, when placed in proper circumstances, and when the actions of the vascular system are vigorous and healthy. Thus we find even fractured and dislocated bones make great advances, in young people, to their original figure or situation. The gradual reduction and shaping of the osseous case in necrosis, also belong to the same law of the animal economy.

Of Semi-decussation of the Optic Nerves. By WILLIAM HYDE WOLLASTON, M.D. V. P. R. S.

[From the Philosophical Transactions for 1824.]

WHETHER we consider the astonishing subtlety of that medium which renders visible to us objects existing at the most immeasurable distances from us, or that delicately constituted organ which, by its general structure, collects the rays of light, and, by a nice adaptation of its parts, concentrates their force on the sentient fibres of the retina, expanded over its inner surface, we can feel no surprise that such great talents should have been devoted to investigate the curious properties of the one, or that the structure of the other should have been examined with so much assiduity.

The keenness of inquiry manifested by the cultivators of anatomy, in observing the most minute parts that have escaped the notice of their predecessors, shows that any addition to the common stock of our information on this subject will be gratifying to a certain portion of the members of this Society, and probably not uninteresting to the Society at large.

It is not my object, in the present paper, to examine either the first effect of the cornea in rendering the rays of light convergent, or the power of the crystalline lens in finally bringing them to a focus on the retina. It is not my intention to investigate whether the adaptation of the eye to different distances is effected by alteration of the form of the lens from its own muscular structure, or by alteration of its place, from the agency of other muscles. Nor do I mean to consider either the *involuntary* motions of the iris dependent on the quantity of light present, or that *voluntary* contraction of it by which we adapt the aperture of the pupil for distinct vision at different distances, limiting thereby, what in optics is termed the spherical aberration of the lens.

The subject of my inquiry relates solely to the course by which impressions from images perfectly formed are conveyed to the sensorium, and to that structure and distribution of the optic nerves on which the communication of these impressions depends.

Without pretending to detect, by manual dexterity as an anatomist, the very delicate conformation of the nerves of vision, I have been led, by the casual observation of a few instances of diseased vision, to draw some inferences respecting the texture of that part which has been called the decussation of the optic nerves, upon which I feel myself warranted to speak with some confidence.

It is well known that, in the human brain, these nerves, after passing forwards to a short distance from their origin in the thalami nervorum opticorum, unite together, and are, to appearance, completely incorporated; and that from this point of union proceed two nerves, one to the right, the other to the left eye.

The term decussation was applied to this united portion, under the supposition that, though the fibres do intermix, they still continue onward in their original direction, and that those from the right side cross over wholly to supply the left eye, while the right eye is supplied entirely from fibres arising from the left thalamus.

In this opinion, anatomists have felt themselves confirmed by the result of their examination of other animals, and especially that of several species of fish, in which it is distinctly seen that the nerves do actually cross each other as a pair of separate cords, lying in contact at their crossing, but without any intermixture of their fibres.

In these cases it is most indisputably true, that the eye upon the right side of the animal does receive its optic nerve from the left side of the brain, while that of the left eye comes from the right side; but it is not a just inference to suppose the same continuity preserved in other animals, where such complete separation of the entire nerve is not found.

On the contrary, I not only see reason, from a species of blindness which has happened to myself more than once, to conclude that a different distribution of nerves takes place in us, but I think my opinion supported by this evident difference of structure in fishes.

It is now more than twenty years since I was first affected with the peculiar state of vision to which I allude, in consequence of violent exercise I had taken for two or three hours before. I suddenly found that I could see but half the face of a man whom I met; and it was the same with respect to every object I looked at. In attempting to read the name *Johnson*, over a door, I saw only *son;* the commencement of the name being wholly obliterated to my view. In this instance the loss of sight was towards my left, and was the same whether I looked with the right eye or the left. This blindness was not so complete as to amount to absolute blackness, but was a shaded darkness without definite outline. The complaint was of short duration, and in about a quarter of an hour might be said to be wholly gone; having receded with a gradual motion from the centre of vision obliquely upwards towards the left.

Since this defect arose from over-fatigue, a cause common to many other nervous affections, I saw no reason to apprehend any return of it, and it passed away without need of remedy, without any further explanation, and without my drawing any useful inference from it.

It is now about fifteen months since a similar affection occurred again to myself, without my being able to assign any cause whatever, or to connect it with any previous or subsequent indisposition. The blindness was first observed, as before, in looking at the face of a person I met, whose left eye was to my sight obliterated. My blindness was in this instance the reverse of the former, being to my right (instead of the left) of the spot to which my eyes were directed; so that I have no reason to suppose it in any manner connected with the former affection.

The new punctum cœcum was situated alike in both eyes, and at an angle of about three degrees from the centre; for, when any object was viewed at the distance of about five yards, the point not seen was about ten inches distant from the point actually looked at.

On this occasion the affection, after having lasted with little alteration for about twenty minutes, was removed suddenly and entirely, by the excitement of agreeable news respecting the safe arrival of a friend from a very hazardous enterprise.

In reflecting upon this subject, a certain arrangement of the optic nerves has suggested itself to me, which appears to afford a very probable interpretation of a set of facts, which are not consistent with the generally-received hypothesis of the decussation of the optic nerves.

Since the corresponding points of the two eyes sympathise in disease, their sympathy is evidently from structure, not from mere habit of feeling together, as might be inferred, if reference were had to the reception of ordinary impressions alone. Any two corresponding points must be supplied with a pair of filaments from the same nerve, and the seat of a disease in which similar parts of both eyes are affected must be considered as situated at a distance from the eyes, at some place in the course of the nerves where these filaments are still united, and probably in one or the other thalamus nervorum opticorum.

It is plain that the cord, which comes finally to either eye, under the name of optic nerve, must be regarded as consisting of two portions,—one half from the right thalamus, and the other from the left thalamus nervorum opticorum.

According to this supposition, decussation will take place only between the adjacent halves of the two nerves. That portion of nerve which proceeds from the right thalamus to the right side of the right eye, passes to its destination without interference; and, in a similar manner, the left thalamus will supply the left side of the left eye with one part of its fibres, while the remaining halves of both nerves, in passing over to the eyes of the opposite side, must intersect each other, either with or without intermixture of their fibres.

Now, if we consider rightly the facts discovered by comparative anatomy in fishes, we shall find that the crossing of the entire nerves in them to the opposite eyes, is in perfect conformity to this view of the arrangement of the human optic nerves. The relative position of the eyes to each other in the sturgeon, is so exactly back to back, on opposite sides of the head, that they can hardly see the same object; they can have no points which generally receive the same impressions, as in us; there are no corresponding points of vision requiring to be supplied with fibres from the same nerve. The eye which sees to the left has its retina solely upon its right side, and this is supplied with an optic nerve arising wholly from the right thalamus; while the left thalamus sends its fibres entirely to the left side of the right eye, for the perception of objects situated on the right. In this animal, an injury to the left thalamus might be expected to occasion entire blindness of the right eye alone, and want of perception of objects placed on that side. In ourselves, a similar injury to the left thalamus would occasion blindness (as before) to all objects situated to our right, owing to insensibility of the left half of the retina of both eyes.

A disorder that has occurred within my own knowledge in the case of a friend, seems fully to confirm this reasoning, as far as a single instance can be depended upon. After he had suffered severe pain in his head for some days, about the left temple, and toward the back of the left eye, his vision became considerably impaired, attended with other symptoms indicating a slight compression on the brain.

It was not till after the lapse of three or four weeks that I saw him, and found that, in addition to other affections which need not here be enumerated, he laboured under a defect of sight similar to those which had happened to myself, but more extensive, and it has unfortunately been far more permanent. In this case the blindness was at that time, and still is, entire, with reference to all objects situated to the right of his centre of view.

Fortunately, the field of his vision is sufficient for writing perfectly. He sees what he writes, and the pen with which he writes, but not the hand that moves the pen. This affection is, as far as can be observed, the same in both eyes, and consists in an insensibility of the retina on the left side of each eye. It seems most probable that some effusion took place at the time of the original pain on that side of the head, and has left a permanent compression on the left thalamus. This partial blindness has now lasted so long without sensible amendment, as to make it very doubtful when my friend may recover the complete perception of objects on that side of him.

In reviewing the several phenomena that I have described, we find partial blindness occurring at the same time in both eyes. This sympathy from disease is readily explained, on the supposition that the parts which sympathize receive their nerves from the same source, while the opposite halves of the eyes, which are not at the same time similarly affected, are supplied from an opposite source; and the inference is immediate, that, in common vision also, the sympathy of corresponding points, which receive similar impressions from the same object, is dependent on the arrangement of nerves thus detected by disease.

We find moreover in the sturgeon, (and it is the same in some other fishes,) whose eyes can scarcely see the same object at once, and have no corresponding points which ordinarily sympathize, that the two eyes do not receive any nervous fibres from the same source; but one eye receives its nerve wholly from one side, and the other from the other side of the brain.

From the structure of these fish, we learn distinctly that the perception of objects toward one side is dependent on nerves derived from the opposite side of the brain; and, in the last case of diseased vision above related, we find apparent injury to one side of the brain followed by blindness toward the opposite side of the point to which both eyes are directed.

A series of evidence in such apparent harmony throughout, seems clearly to establish that distribution of nerves I have endeavoured to describe, which may be called the semi-decussation of the optic nerves.

Note.—We think it right to insert, in connexion with the paper of Dr Wollaston, the following extract of a letter from a distinguished philosopher in Germany to the editor of the Edinburgh Philosophical Journal. What renders the circumstance to which he alludes more worthy of notice, is, that the same complaint is constantly made by the English with regard to their continental neighbours.—Ed. N. E. J.

"I do not understand how it happens that the labours of the Germans, and even of other nations, in comparative anatomy, are so little known in England. Many observations and opinions, which are considered as new in your country, have been long known to us in Germany. In proof of this I may mention, that, in the thirty-fourth number of the London Journal of Science, there is an extract from a memoir on the "*Semidecussation of the Optic Nerves,*" in which the illustrious author, from a pathological appearance he observed, infers a partial crossing of the optic nerves, without appearing to know, not only that many authors, from similar grounds, have come to the same conclusion, but also, that this kind of crossing had been observed in the eye of the human species by Vicq d'Azyr, Caldani, the brothers Wentzel and Chiasmon, and by G. R. Treviranus in the eye of the Simia Aygula. (*Vide Verm. Schriftin, von G. R. & L. C. Treviranus,* Th. iii. p. 168."

Experiments to ascertain how far the Presence of Albumen and Muriatic Acid interfere with Action of Bichloride of Mercury and Protomuriate of Tin upon each other. By John Bostock, M.D. F. R. S.

[From the Edinburgh Medical and Surgical Journal.]

In Dr Paris's work on Medical Jurisprudence, he is led to refer to the experiments that I made many years ago (and which are inserted in an early Number of your Journal), for the purpose of ascertaining, how far it is possible for a poison to be received into the stomach and prove fatal, and yet be so entirely evacuated from it, as that, upon examination after death, no trace of it may be discoverable. Dr Paris speaks of the experiments with that candour which characterizes every part of his valuable performance; but adds, that it is to be regretted that the stomach itself was not subjected to chemical examination.

A remark of the same tendency is made in your review of the "Medical Jurisprudence," which has induced me again to turn my attention to the subject. The curious fact that has been lately discovered by Dr Prout, of the presence of muriatic acid in the digestive organs, is of importance in this inquiry, as this substance may materially affect all the processes, where we are examining the chemical nature of the contents of the stomach.

Being so situated as not to be able to operate upon the stomachs of living animals, I performed some experiments, which may, at least, be regarded as having a reference to the question, and which appear to be so far conclusive as to show, that the first of the objections urged by Dr Paris and yourself is not without foundation. As a preliminary step in the inquiry, I began by ascertaining correctly, in the *first* place, the degree of delicacy with which the presence of bichloride of mercury may be detected by the protomuriate of tin; and, *secondly*, how far the presence of albumen interferes with the action of the salts of mercury and of tin upon each other.

A standard solution of *albumen ovi* in water was formed, containing 1 part of dry albumen to 100 of distilled water; and a solution of similar strength was formed of the bichloride of mercury. The protomuriate of tin was prepared by digesting the metal in strong colourless muriatic acid, the tin being added in greater quantity than the acid was capable of dissolving.

1. A portion of the solution of bichloride of mercury was diluted, until it contained $\frac{1}{500}$ of its weight of the salt; to 100 minims of this solution 1 drop of the protomuriate of tin was added, when the whole of the fluid was rendered of a deep blackish-grey colour.

2. For the purpose of comparison, a portion of the standard solution of albumen had $\frac{1}{500}$ of its weight of the bichloride of mercury added, and to 100 minims of this, one drop of the protomuriate of tin; the fluid was rendered of a deep grey colour, and a kind of imperfect coagulation took place; in 40 hours, the colour was much deepened; and, upon the whole, the effect appeared more considerable than in No. 1.

3. The solution of the bichloride was then diluted until it contained only $\frac{1}{10000}$ of its weight of the salt; 100 minims of this had 1 drop of the protomuriate added; a decided grey tinge was produced; and in 24 hours a visible precipitate was thrown down; and even when an equal volume of water was added, so as to reduce the bichloride to $\frac{1}{20000}$, the grey co-

lour was still perceptible, and the precipitate might be detected.

4. A comparative experiment was performed, in which the standard solution of albumen was employed, containing $\frac{1}{10000}$ of its weight of the bichloride; the effect of the protomuriate of tin was just perceptible, although less so than in No. 3; and when only $\frac{1}{20000}$ of its weight of the bichloride was added to the solution of albumen, the effect of the protomuriate could no longer be perceived.

5. The experiment was varied in the following manner; 100 minims of the standard solution of albumen was added successively to 100 minims of a solution of the bichloride of mercury, containing $\frac{1}{500}$, $\frac{1}{2500}$, and $\frac{1}{12500}$ of its weight of the salt, one drop of the protomuriate of tin being likewise added in each case; the result was, that the dark colour was distinctly visible in the second case; but in the last it was no longer to be perceived.

From these experiments it would appear, that $\frac{1}{20000}$ of a grain of the bichloride of mercury, dissolved in 100 grs. of water, may be detected by one drop of the protomuriate of tin; but that, if $\frac{1}{100}$ of a grain of albumen be previously added to the water, we can detect only about $\frac{1}{10000}$ of its weight of the bichloride.

The next point was, to ascertain how far the *bichloride* of mercury can be detected by the usual tests, when *it has been previously combined with albumen* in its coagulated state, as it may be supposed to exist in the substance of the stomach.

6. Thirty grains of firmly coagulated albumen had 1 drop of a saturated solution of the bichloride of mercury added to it; after 48 hours it was digested for some time in 4 drachms of hot water, and well triturated with it; the fluid was then passed through a filtre. To a portion of this fluid the protomuriate of tin was added, without producing any effect; while when the protomuriate was dropped upon the albumen itself, it immediately blackened it. From this experiment we learn, that when the *albumen, in a coagulated state, has been combined with the bichloride of mercury*, the bichloride may be detected by the protomuriate of tin, when applied to the albumen itself, but that the *bichloride cannot be separated from it by digestion in water*. Hence, we see the propriety of Dr Paris's remark, that the bichloride of mercury might possibly have been detected by examining the substance of the stomach itself, when it could not be discovered in its contents.

In the *third* place, I wished to examine how far the presence of muriatic acid in the stomach might be expected to affect the above results.

For this purpose, an experiment similar to No. 2 was performed, except that 2 drops of muriatic acid were added; a copious black precipitate was produced, which quickly subsided, leaving the fluid transparent; the difference between the results of Nos. 2 and 7 was, that, in the latter case, the precipitate appeared to be more dense, and to subside more rapidly. After standing 48 hours, the black colour of the precipitate was much diminished; the protomuriate of tin being then added to the fluid, blackened it; and the colour did not appear to be diminished after standing 24 hours.

8. An experiment similar to No. 6 was then performed, except that, together with the bichloride, three drops of muriatic acid were added to the coagulated albumen. In this case a very slight effect was perceptible in the filtered fluid, upon the addition of the protomuriate; while the albumen itself was blackened, as in the former case.

9. Two equal quantities were taken of the filtered fluid from No. 8, after the protomuriate of tin had been added to it; to one of them a minute portion of albumen was added, and afterwards to each of them one drop of a very dilute solution of the bichloride: they were both rendered black; but the one containing the albumen decidedly the most so. Hence it appears, that the presence of free muriatic acid does not prevent the detection of the bichloride of mercury when albumen is present, but appears even to render it more apparent, by promoting the coagulation of the albumen.

I think it unnecessary to give you an account of the other experiments which I performed, as the above appear sufficient to prove the point under consideration, so far as the action of the metallic salts on each other and on the albumen is concerned. We may, with some probability, infer from them what would be the case with respect to the stomach itself; and I should feel much gratified if any of your correspondents may be induced by these remarks to make the trial.

Before I conclude, I shall beg to give you an account of an occurrence which fell under my observation, and which, I conceive, very aptly illustrates the question now before us. A quantity of the white oxide of arsenic had been mixed with oatmeal, for the purpose of destroying rats, and a part of the meal was afterwards, by mistake, made into gruel. Some spoonfuls of the gruel were swallowed, when, in consequence of the peculiar flavour, the mistake was discovered. Medical assistance was had recourse to immediately; evacuants and diluents were copiously administered; notwithstanding which, the usual symptoms that follow the administration of arsenic took place, and even with some considerable violence. In about 36 hours they were nearly removed, and the patient complained of little else but great weakness and exhaustion, from which he appeared in two days more to have so far recovered, that medical attendance was thought to be no longer necessary. After an interval of five days, however, he was rather suddenly seized with pains in the region of the stomach, his strength rapidly declined, his pulse sunk, and he expired in a few hours. The stomach was examined, and was found contracted and somewhat hard; its colour was a bright red, with three or four patches, of about the size of a half crown, which were purple or crimson. The surface was carefully examined, to ascertain whether any arsenic could be found adhering to it, but without success; nor could any be detected in the fluid which was scraped from the surface.

This case may, I think, be fairly adduced as an instance of what I attempted to prove by my former experiments, as, from the nature of the poison, as well as from the length of time which elapsed between the reception of it into the stomach and the death of the patient, and from the state of the individual during this period, we may pretty confidently conclude, that none of the arsenic remained in the stomach. Although, therefore, I fully admit the imperfection of my experiments, I apprehend that the above case will confirm the inference that I drew, as it appears, too hastily from them. And, indeed, the opinion itself is one which, upon reflection, appears so reasonable, and to accord so well with our general notions of the laws of the animal economy, that I should be disposed to say that it scarcely requires to be substantiated by the aid of direct experiment.

London, 6*th July* 1824.

INTELLIGENCE.

MASSACHUSETTS MEDICAL SOCIETY.

In accordance with a Law of the Commonwealth enacted February 10th, 1789, and in obedience to a By Law of the Society, the Counsellors of the said Society give notice, that candidates for examination before the Censors, must hereafter give evidence of having read and studied the books whose titles are contained in the list which follows, viz.

The Edinburgh System of Anatomy.
Bell's System of Anatomy, or Wistar's Anatomy.
Haller's First Lines of Physiology.
Richerand's Elements of Physiology.
Bichat on Life and Death.
Bichat's General Anatomy translated by Dr Hayward.
Beclard's Additions to Bichat's General System of Anatomy, translated by Dr Hayward.
Lavoisier's Elements of Chemistry.
Gorham's do.
Pharmacopeia of the United States.
Bigelow's Sequel to the Pharmacopeia.
Thacher's Dispensatory.
Cooper's Surgery or Dorsey's Surgery.
Boyer's System of Surgery.
Boyer on the Bones.
Hunter's Treatise on the Blood, Inflammation and Gun-Shot Wounds.
Burns' Anatomy of the Gravid Uterus.
Denman's System of Midwifery.
Denman's Aphorisms.
Good's Physiological System of Nosology.
Good's Study of Medicine.
G. Fordyce's Dissertations on Fever.
Armstrong's Illustrations of Typhus, &c.
Sydenham's Works.
Heberden's Commentaries on Diseases.
Underwood on Diseases of Children.
Hunter's Treatise on Lues Venerea.
Baillie's Morbid Anatomy.
Cook's Abridgment of Morgagni on the Seats and Causes of Diseases.

Although the books mentioned in the foregoing list are all that candidates are required to have read, yet the Counsellors believe that many more may be carefully read during the period of pupillage, and they have therefore prepared another list of books, which they recommend for the perusal of students in medicine.

Books Recommended.

ANATOMY.

Winslow's Anatomy.
Soemmerring's do.

Cheselden's Anatomy.
Boyer's do.
Albinus' Anatomical Plates.
Lizars' Anatomical do.
Charles Bell's System of Dissections.
London Dissector.
Shaw's Manual for the Student of Anatomy.
Wilson's Lectures on the Skeleton.
——— ——— ——— *Vascular System.*

PHYSIOLOGY.

Halleri Elementa Physiologiæ.
Boerhaave's Institutes.
Nouveaux Elemens de la Science de l'Homme, par Barthez.
Bichat on the Membranes.
Blumenbach's Physiology.
——— Comparative Anatomy.
Cuvier's do. do.
Fordyce on Digestion.
Hunter on the Animal Economy.
Hewson on the Blood and Lymphatics.
Sheldon on the Absorbent System.
Bostock on Respiration.
Ellis on the Effects of Germination, Vegetation and Respiration on the Air; in two parts.
Parry on the Pulse of the Arteries.
Magendie's Physiology, translated by Revere.

CHEMISTRY.

Davy's Elements of Chemical Philosophy.
Thompson's System of Chemistry.
Black's do.
Murray's System of Chemistry.
Brande's Manual of do.
Ure's Chemical Dictionary.

MATERIA MEDICA AND PHARMACY.

Murray's Apparatus Medicaminum.
Thesaurus Medicaminum.
Cullen's Materia Medica.
Lewis's do. do.
Pearson's do. do.
Murray's do. do.
Bigelow's Medical Botany.
Paris's Pharmacologia.

SURGERY.

Pearson's Principles of Surgery.
Bell's (*J.*) *do. do.*

Thomson on Inflammation.
Cooper's Surgical Dictionary, by Dorsey.
Bell's (Ch.) Operative Surgery.
Coopers Lectures on Surgery.
Pott's Works.
Abernethy's Surgical Works.
Hey's Practical Observations on Surgery.
Desault's Surgery.
Richter's Medical Cases in Surgery.
Larrey's Military Surgery.
Jones on Hemorrhage.
Home on the Formation of Pus.
Bell (B.) on Ulcers.
——— on Lues Venerea.
Ware on the Diseases of the Eye.
Scarpa on the Eye.
Wardrop on the Morbid Anatomy of the Eye.
Saunders on the Eye.
——— on the Ear.
Travers on the Eye.
Adams on the Eye.
Hunter on the Teeth.
Fox on the Teeth.
Cooper and Travers' Surgical Essays.
Cooper (A.) on Hernia.
Lawrence on do.
Travers on Wounds of the Intestines.
Crowther on White Swellings.
Ford on the Hip Joint.
Home on the Strictures of the Urethra.
Bell (C.) on Diseases of the do.
Howship on Diseases of the Urinary Organs.
Copeland on Stricture of the Rectum.

MIDWIFERY.

Smellie's Midwifery.
Burns' Principles of Midwifery.
Ramsbotham's Observations on Midwifery.
Conquest's Outlines of Midwifery.
Merriman on Difficult Parturition.
Rigby on Uterine Hemorrhage.
Douglass on the Evolution of the Fœtus.
White on Lying-in Women.
Gordon on Puerperal Fever.
Hey on do. do.

Armstrong on Puerperal Fever.
Clarke on the Diseases of Females.

PATHOLOGY AND THERAPEUTICS.

Celsi Opera.
Van Swieten's Commentaries on Boerhaave.
Conspectus Medicinæ Theoreticæ, auctore Jacobo Gregory.
Burserius' Institutes of Medicine.
Nosologia Methodica, auctore F. B. de Sauvages.
Cullen's Nosology.
Cullen's First Lines of the Practice of Physic.
Brown's Elements of Medicine.
Darwin's Zoonomia.
Parry's Elements of Therapeutics, &c.
Chapman's Therapeutics.
Thomas' Practice of Physic.
Morgagni on the Seats and Causes of Diseases.
Baillie's Morbid Anatomy—with the plates.
Whytt's Works.
Fothergill's Works.
Rush's Works.
Cheyne's Essays on Diseases of Children.
Percival's Medical Works.
Currie on the Diseases of America.
Kirkland's Medical Surgery.
Zimmerman on Experience in Physic.
Huxham on Fevers and Sore Throat.
R. Jackson on Fevers of Jamaica.
R. Jackson's Outlines of the History and Cure of Fevers.
R. Jackson on Contagious Fever.
R. Jackson on Cold Water.
Currie on Cold Water.
Philip (alias Wilson) on Febrile Diseases.
Senac on Intermittent Fever.
Alibert on do. do.
Beddoes on the Combination of Fever and Inflammation.
Chisholm on Pestilential Fevers.
Bancroft on Yellow Fever, &c.
Fellowes on the Fever of Andalusia, &c.
Strong on Petechial Fever.
North on do. do.
Hale on the Epidemic commonly called Spotted Fever, at Gardiner in Maine.
Gallup on the Epidemics of Vermont.
Clark on Fevers and Scarlatina.

Armstrong on Scarlet Fever, Measles and Pulmonary Consumption.
Clark on Hot Climates.
Lind on do. do.
Mosely on Tropical Diseases.
Johnson on Diseases of Hot Climates.
Chalmers on Diseases of South Carolina.
Cleghorn on Diseases of Minorca.
Hillary on do. of Barbadoes.
Hunter on do. of the Army in Jamaica.
Pringle on do. of the Army.
R. Jackson on the Medical Department of Armies.
Lind on Diseases of Seamen.
Lind on the Scurvy.
Blane on Diseases of Seamen.
Trotter's Medicina Nautica.
Blackall on Dropsies
Portal sur l'Apoplexie.
Cheyne on Apoplexy, Lethargy, &c.
Cook on Nervous Diseases.
Swan on do. do.
Hall on Mimoses.
Arnold on Insanity.
Crichton on Mental Derangement.
Pinel on Insanity.
Haslam on Madness.
Cox on Insanity.
Rush on Mental Diseases.
Corvisart on Diseases of the Heart.
Burns on do. do.
Reeder on do. do.
Parry on Syncope Anginosa.
Davis on Carditis.
Maclean on Hydrothorax.
Laennec on Diseases of the Chest, translated by Forbes.
Baron on Tuberculous Diseases.
Bree on Disordered Respiration.
Young on Consumption.
Stark's (Wm.) Works.
Badham on Bronchitis.
Watts on Chincough.
Peirson on do.
Pemberton on Diseases of the Abdominal Viscera.
Saunders on the Liver.
Philip on Indigestion.
Harty on Dysentery.

Hamilton on Purgative Medicines.
Brera on Worms; translated by Coffin.
Rollo on Diabetes.
Marcet on Calculous Disorders.
Wilson's Lectures on the Urinary and Genital Systems.
——— on Distortions of the Spine.
Adams on Morbid Poisons.
Bateman on Cutaneous Diseases, with plates.
Willan on Cowpox.
Withering on Scarlatina.
Scudamore on Gout, Rheumatism and Gravel.
Ring on Gout.
Sutton on Delirium Tremens, Peritonitis and Gout.
Fowler on Rheumatism.
Haygarth on do.
Home's Medical Facts.
——— Clinical Experiments.
Ferriar's Medical Histories and Reflections.
Bardsley's Medical Reports.
Orfila on Poisons.
Hamilton on Digitalis.
Withering on Foxglove.
Crumpe on Opium.
Fowler on Tobacco.
——— on Arsenic.
Roberson on Cantharides.
Haden on Colchicum Autumnale.

MISCELLANEOUS AND PERIODICAL WORKS.

Friend's History of Medicine.
Hunter's Introductory Lectures.
Cabanis on the Revolutions in Medical Science.
Hutchinson's Biographia Medica.
Young's Medical Literature.
Gregory on the Duties and Qualifications of a Physician.
Rush's Introductory Lectures.
Percival's Medical Ethics.
Farr's Medical Jurisprudence.
Beck on Medical do.
J. G. Smith's Forensic Medicine.
Edinburgh Medical Essays.
Medical Observations and Inquiries.
Medical Transactions of the College of Physicians of London.
Transactions of the College of Physicians of Philadelphia.
Memoirs of the Medical Society of London.

Memoirs of the Massachusetts Medical Society.
Duncan's Medical Commentaries.
Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge.
Medico-Chirurgical Transactions.
Transactions of the King's and Queen's College of Physicians of Ireland.
Dublin Hospital Reports.
London Medical and Physical Journal.
Edinburgh Medical and Surgical do.
New York Medical Repository.
New York Medical and Physical Journal.
New England Journal of Medicine and Surgery.
Medico-Chirurgical Review.*

The qualifications of candidates for examination are stated in Chapter IV. Section II. of the by-laws of the Society. That section is here copied in order to give to it greater publicity.

'Every person educated within this Commonwealth, shall have the following qualifications to entitle him to an examination by the Censors of the Society, or by those of any district Society.

'1st. He shall be of sound mind, and shall have such an acquaintance with the Latin language, as is necessary for a medical or surgical education, and with the principles of geometry and experimental philosophy.

'2d. He shall have studied three full years under the direction, and attended the practice, of some one or more of the Fellows or Honorary Members of the Society; during which time, he shall have studied the most approved authors in anatomy, chemistry, materia-medica, surgery, midwifery, and the theory and practice of medicine; or, at least, all those which the Counsellors shall from time to time specify, as constituting a proper course of medical or surgical education.

'Any person educated without this Commonwealth, may be admitted to an examination, either by the Censors of the Society, or by those of any district, if he possesses the qualifications specified in the first of the articles above mentioned; and instead of those required in the second, shall have studied three full years under the direction, and attended the practice of some reputable physician or physicians, surgeon or surgeons, as the case may be.

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* The titles of those books which are considered most important for every medical student to read, are printed in *italics;* but there are some books of great value which are not so distinguished, from a consideration of their size, or of the difficulty in procuring them; or because they are principally necessary for persons in particular situations only.

'The Censors of the Society, and those of the several districts, before examining any candidate, shall demand and receive from him a satisfactory certificate of his being qualified in one or the other of the modes before mentioned, and such certificate shall be delivered by the Censors to the Secretary of the Board, whose duty it shall be to put it on file, and make a record thereof." Published by Order,

JOHN GORHAM, *Recording Secretary.*

March 2d, 1825.

Boylston Medical Society's Premium.—Hon. Ward Nicholas Boylston, who has always been so distinguished a benefactor of the profession of medicine among us, has for the last few years, offered a complete pocket case of Surgical Instruments, as a premium for the best Dissertation read to the Society at the meetings held during the winter course of Lectures at the Medical College. The Premium is awarded by a committee of physicians chosen annually by the society, and was this year given to John D. Fisher, M. D. of Dedham, a graduate of the present year.

Medical Schools of the United States and number of pupils.—There are fourteen medical schools in the United States, viz. seven in New-England, three in the Middle, two in the Southern, and two in the Western States. Their names, and the number of pupils frequenting them are as follows.

Medical School of Maine, Bowdoin College, (Brunswick,)	60
Medical School of Dartmouth College, (Hanover, N. H.)	80
Massachusetts Medical College, (Boston,)	130
Berkshire Medical Institution, (Pittsfield, Mass.)	100
Medical School of Yale College, (New Haven, Conn.)	110
Castleton Medical Academy, (Vermont,)	130
Medical School of the University of Vermont, (Burlington,)	60
Medical School of the University of New-York, Western District, (Fairfield,)	120
Medical School of the University of New-York, (city of New-York.)	196
Medical School of Pennsylvania, (Philadelphia,)	480
Medical School of Maryland, (Baltimore,)	300
Medical School of Charleston, (S. C.)	50
Medical School of Ohio, (Cincinnati,)	40
Medical School of Translyvania University, (Lexington, Ky.)	200
	2056

LIST OF NEW PUBLICATIONS.

N. B.—*Publishers of Original Medical Works, or of new editions of Foreign Medical Works, are requested to send to the Publishers or Editors, the titles of such works at full length, and also the prices at which they are sold.*

AMERICAN WORKS.

Practical Observations on the lateral Operation of Lithotomy; and on various improved and new modes of performing this Operation; together with Remarks on the Recto-Vesical Operation. By Robert Muter, M. D. Member of the Royal College of Surgeons in London, Author of "Observations on various novel Modes of operating on Cataract," &c. 8vo. pp. 107. New York. 1824.

Report made to the Institute of France, on a Memoir, presented by M. Civiale, M. D. on the Destruction of the Stone in the Bladder, without the Operation of Lithotomy. Translated from the French by R. La Roche, M. D. Philadelphia. 1824. 8vo. pp. 38.

On the Utility of Country Medical Institutions. An introductory Lecture, delivered at the College of Physicians and Surgeons of the Western District of New York, Dec. 13, 1824. By T. Romeyn Beck, M. D. Professor of the Institutes of Medicine, and Lecturer on Medical Jurisprudence. 8vo. pp. 20. Albany. 1825.

AMERICAN EDITIONS OF FOREIGN WORKS.

The Study of Medicine. By John Mason Good, M. D. &c. in five volumes. 2d American edition. Philadelphia. 1825.

FOREIGN WORKS.

The Medical Student's Guide, &c. &c. to which is added a List of the most approved Elementary and Standard Medical Works. 18mo. pp. 102. 1824.

Practical Remarks. Part I. On Acute and Chronic Ophthalmia, Ulcers of the Eyes, &c. Part II. On Remittent Fever, viz. Simple and Complicated. By Thomas O'Halloran, M. D. 8vo. pp. 148. London. 1824.

Manuale Medicum; or a Medical Pocket Book for the use of Students. By H. L. Sanders, Surgeon. 8vo. London. 1824.

Practical Observations on Hydrophobia; with a Review of the Remedies employed, and Suggestions for a different Treatment of the Disease. By John Booth, M. D. London. 1824.

Lectures on Digestion and Diet. By Charles Turner Thackrah. pp. 156. London. 1824.

An Inquiry into the Mode in which Mercurial Ptyalism operates in the cure of Acute Disease and whether there exist other remedies of Similar Action, that may be advantageously substituted for it. By James Arnott. pp. 16. London. 1824.

The Anatomy of the Brain, adapted for the use of Students; comprising directions with regard to the Method to be pursued in its Dissection, conformably to the Mode practised by most Anatomists. pp. 152. London. 1824.

Commentaries on the Diseases of the Stomach and Bowels of Children. By Robley Dunglison, M. D. &c. &c. pp. 201. London. 1824.

Hints towards the Adoption of an Improved Principle of Remunerating the Surgeon-Apothecary, or General Practitioner in Medicine. By T. M. Greenhow. pp. 26. New Castle. 1824.

Lectures of Sir Astley Cooper, Bart. &c. on the Principles and Practice of Surgery; with additional Notes and Cases. By Frederick Tyrrel, Esq. &c. Vol. I. 8vo. pp. 352. London. 1824.

Outlines of a System of Medico-Chirurgical Education. With coloured Plates. By Thomas Turner. 8vo. pp. 370. London. 1824.

A view of the Formation, Discipline, and Economy of Armies; with an Appendix, containing Hints for Medical Arrangement in actual War. By Robert Jackson, M. D. A new Edition enlarged. 4to. pp. xxii. and 545. London. 1824.

A Practical Treatise on Hemorrhoids, or Piles, Strictures, and other important Diseases of the Rectum and Anus; being with some Additions, a Treatise to which the Jacksonian prize was adjudged by the Royal College of Surgeons. By George Calvert. 8vo. pp. xiii. & 359. London. 1824.

Observations illustrative of the Nature and Treatment of the prevailing Disorders of the Stomach and Liver. By Thomas John Graham, M. D. 8vo. pp. 224. London. 1824.

An Essay on Curvatures and Diseases of the Spine, including all the Forms of Spinal Distortion; to which the Fothergillian Gold Medal was awarded. By R. W. Bampfield, Esq. pp. 387. London. 1824.

A Nosological practice of Physick, embracing Physiology. By George Pearson Dawson, M. D. pp. 380. London. 1824.

Clinical Report on Dropsies, with Observations, explanatory of their Pathology and Therapeutics; with an Appendix, on the Theory and Treatment of Organic Diseases in General. By Robert Venables, M. B. pp. 238. London. 1824.

Hints respecting the Improvement of the Literary and Scientific Education of Candidates for the Degree of Doctor of Medicine, in the University of Edinburgh. By a Graduate of King's College, Aberdeen. pp. 21. Edinburgh. 1824.

An Exposition of the Natural System of the Nerves of the Human Body, with the Papers from the Philosophical Transactions on the same Subject. By Charles Bell. London. 1824.

Report of the Epidemic Cholera, as it has appeared in the Territories, subject to the Presidency of Fort St. George. By William Scott. Madras. 1824. Folio. pp. lxxii. 292. With an Appendix.

Observations on the History, Use, and Construction of Obturateurs, or Palates. By James Snell, Surgeon-dentist. 8vo. pp. 52. 1824.

Concise Narrative of an Ophthalmia, which prevailed in a detachment of his Majesty's 44th Regiment, on their Voyage to Calcutta, with an account of other tropical Diseases. By Richard Jones, F. R. C. S. &c. pp. 57. Warwick. 1824.

Researches, Physiological, and Pathological, instituted principally with a view to the Improvement of Medical and Surgical Practice. By James Blundell, M. D. Lecturer on Physiology and Midwifery at St. Thomas and Guy's Hospitals. 8vo. pp. 145. London. 1824.

Elements of the Anatomy of the Human Body in its sound State; with Occasional Remarks on Physiology, Pathology, and Surgery; 12 Plates. By Alexander Monro, M. D. &c. 2 vols. 8vo. Edinburgh. 1824.

A comparative view of Fever and Inflammatory Complaints, with Essays, illustrative of the Seat, Nature, and Origin of Fever. By Thomas Mills, M. D. 8vo. Dublin. 1824.

A Treatise on the most celebrated Mineral Waters of Ireland. By Michael Ryan, M. D. 8vo. Kilkenny.

On Cholera, more especially as it has occurred during late Years in British India. By Thomas Brown. Edinburgh. 1824.

Anatomical Plates; by John Lizars. Part VI. Muscles and Joints of the Lower Extremity.

A Map of the Ear; the subjects taken from Anatomical Preparations in the possession of John Harrison Curtis, Esq. designed chiefly for the use of his Pupils.

Opinions on the Causes and Effects of the Disease, denominated Tic Douloureux; deduced from Practical Observations of its supposed Origin in lateral Pressure, Distortion, or undue Contact in the teeth; but more particularly those nearest the Maxillary Sinus, and thence conveying its distressing Sensations to the most distant Extremities of the System. 3 plates, with Cases. By Charles Bew, Surgeon Dentist, &c. 8vo. pp. 94. London. 1824.

Remarks on interstitial Absorption of the Neck of the Thigh Bone. By Benjamin Bell.

The Principles of Midwifery: including the Diseases of Women and Children. By John Burns, C. M. 6th edition, enlarged. London. 1824.

Nosographie Medicale, ou Elemens de Medecine Pratique, à l'usage des Elevés en Medecine et en Chirurgie. Par S. P. Anthenac. Tome I. pp. 547. Paris. 1824.

Considerations sur les Convulsions qui attaquent les Femmes Enceintes. Par M. Chaussier, &c. pp. 23. Paris. 1824.

Traité des Maladies du Coeur, and des gros Vaisseaux. Par R. J. Bertin, &c. Redigé. Par J. Bouillard, M. D. 6 planches. pp. 464. Paris. 1824.

Dictionnaire de Médecine. Par M. M. Adelon, Béclard, Biett, Breschet, &c. &c. en. 18 Tomes. Tome Onzieme. Héme-Hyst. 8vo. pp. 552. Paris. 1824.

Nouveaux Elémens de Physiologie Pathologique, et Exposé des Vices de l'Experience et de l'Observation en Physiologie et en Médecine. Par P. Alexandre Sarun. 8vo. pp. 384. Paris. 1824.

TO CORRESPONDENTS.

A communication has been received from Dr Pierce.

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Dissertation on Paruria Erratica, or Erratic Urine. By John D. Fisher, M.D.*

[Communicated for the New England Journal of Medicine and Surgery.]

DR GOOD has placed this as a species under that class of diseases which he has very classically termed 'eccritica,' or 'diseases of the excernent function.' 'This disease,' says he, 'has often been described under the name of uroplania, which is nothing more than a Greek compound for erratic urine, as it is here denominated; but it has seldom been introduced into Nosological arrangements.' 'The cases, however,' continues he, 'are so numerous and distinct in writers of good authority that it ought not to be rejected.' It will be my object, in this paper, in the first place to show, by noticing the cases which have been reported, that Dr Good had just grounds for introducing this as a disease into his Nosological arrangement; and, in the second place, to offer an explanation of the singular phenomena which it presents. A few years ago a very warm and spirited controversy was carried on, in the Medical and Physical Journal of London, upon the question whether it was possible for urine to be discharged, in a pure and unmixed state, at any foreign outlet. This controversy arose in consequence of an assertion of a Dr. Yeats that a girl then under his care vomited urine. A number of his professional brethren stoutly denied the possibility of such an occurrence, and challenged him to prove that such cases had, or could happen, asserting, at the same time, that the young lady under his care was an impostor, and that he had been completely deceived by her. Being thus challenged and attacked, Dr Yeats published a paper in the 29th number of the Medical and Physical Journal, on Ischuria, in which he attempted to prove that such a phenomenon could happen consistently with the laws of the human economy, and there collected from medical authors and publications, a large number of cases which had actually taken place. To this essay I am indebted for a number of the cases which I shall notice as having occurred; and I shall strengthen the fact by the relation of others, and more recent ones.

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* This Dissertation received the premium of the Boylston Medical Society at the last season, and was also read by the author as an Inaugural Dissertation at his graduation, February 1825.

Urine has been discharged from the cutaneous surface.—In the fifth volume of the Med. Comment. p. 437, Dr Johnston, of Kidderminster, relates the case of a gentleman under suppression of urine, whose skin was covered for several days with ammonia muriata, a salt with which the urine is impregnated. The fluid parts being evaporated with the perspiration, left, no doubt, a saline deposition on the skin similar to what we daily see in our chambers. In Morgagni will be found also cases of urinous sweats, so strong and fœtid, that the smell could scarcely be endured. A young woman, in whom the urine had been long suppressed, was given up as lost, when a sweat, having a strong urinous odour, burst forth in great quantities. During the continuance of these urinous sweats, the patient was much better; but when they ceased, she died in a few days of hydrothorax. There are many cases of a cutaneous discharge of urine mentioned by Bartholin, Malpighi, and Vallisneri and others.

Vandermonde gives the history of a girl who, after having for eight months laboured under exquisite hysteric convulsions, was seized with the stoppage of both the urinary and alvine discharges, which resisted every remedy for three months. The girl recovered, but, during the suppression 'deficientem lotii excretionem supplebat perspiratio cutanea.' Sauvages, in the second volume of his work, mentions the case of a woman of fifty, who laboured seven years under a total stoppage both of urine and fæces: 'interim excretionum harumce defectum supplebant sudores universales copiosissimi fœtidissimi nunc die quolibet, nunc quovis biduo triduove erratice recurrentes et ad duas tresve horas continuati.'—At the end of this period the fæces and urine began to be discharged spontaneously, although she had frequently used the most powerful medicines in vain; and she lived six or seven years after in health.

Dr Darwin also mentions a patient whose urine being suppressed, a copious discharge of sweat took place under the armpits, of a perfectly urinous smell, staining the linen; which ceased again when the usual quantity of urine was discharged by the urethra. In the Philosophical Transactions also may be found many similar cases related.

Urine has been discharged at the ear.—Platerus relates a case, as recorded by Sauvages, of a girl thirteen years of age, who being seized with a suppression of urine, there supervened a very copious serous discharge for several days from the right ear, without suffering any inconvenience: 'interim bene habitat puella neque de ullo affectu conquerebatur.' Upon the return of the urinary discharge, the serous defluxion from the ear ceased, but returned upon the urinary discharge being again suspended. The urine was at last permanently restored, and the girl did well: 'nihil exinde mali perpetiente puella.' A most remarkable case a few years since occurred in Dublin, in which a fluid was discharged from the meatus auditorius externus, in an enormous quantity. I am afraid, says he, to say how much. A most extraordinary case of wandering urine *now exists* in Providence, R. I. (which I shall relate in full hereafter) in which the girl discharges her urine pure and perfect from her right ear in very great quantities; she has occasionally discharged it from her left ear also.

The breasts of women have been occasionally the outlets for the discharge of urine. In the Journal de Medecine is given a case of this kind: 'per mammas lotium virgo reddidit, quæ absque naturæ alvique ostio nata;' and he adds what is very remarkable, and shows how long life will exist under a vicarious discharge, 'pubertatis tamen tempus adtigerit.' In the Philosophical Transactions we meet with cases of this kind. In volume 51st for the year 1759. Dr Dawson relates a case of erratic urine (his relation of which I shall give in another place) in a girl whose breasts afforded one of the outlets for that fluid. And many similar cases are scattered through those works. In a late European Journal is related the singular case of a girl who, from birth, was imperforate both in the anus and meatus urinarius; in fact, in the whole division of the vulva: and who to the age of fourteen, when the account was written, had regularly discharged her urine at the breasts after the manner of milk, and her fæces by a natural vomiting or rejection from the stomach. The girl at Providence, to whom I have already referred, has for a long time, and does even to this day discharge large quantities at her right breast.

Urine has been discharged at the umbilicus. Hildanus and Morgagni mention cases of this kind; and Dr Good in his Nosology refers to authors who have recorded similar cases; these I have not been able to consult. Our countryman Dr Senter, in the history of a singular case under his care, mentioned more particularly hereafter, says that, early in the month of January 1787, for some cause unknown, she could not be relieved by the instrument; nor could she vomit up her urine for several days, when it *passed off by the navel* for three days successively. To these cases I will add that the girl at Providence has almost daily for a length of time (as will appear hereafter) discharged urine at the navel.

Urine has been discharged from the internal surfaces of the mouth and fauces. Cases of vicarious ptyalism in ischuria are very common in authors. 'Unicus ex iis quos vidi,' says the experienced Heberden, 'urinæ saporem in ore questus est.' In some cases, says Dr Home, it seems to have been secreted by the salivary glands, and then to have retained the natural taste of urine. In a case of suppression of urine mentioned by Mr Warner, there was so large a quantity of saltish water, tinged with blood, discharged from the mouth, as to threaten suffocation. 'Salivæ loco,' says Haller from Camerarius, 'de mictu periodico, fœtidissima urina reddita est, faustus quidem eventu.' Natali, the preceptor of the celebrated Malpighi, laboured under ischuria for many days, during which he perceived the taste and smell of urine in his saliva, and the perspiration partook of the same urinous qualities. Albertini relates the history of a young nobleman, who, labouring under this disease not only spat up saliva with the taste and smell of urine, but even almost urine itself, as the colour added to the taste and smell testified; and the fauces were so overloaded with the afflux of this urinous fluid, that the cheeks and parotid glands were considerably swollen. The girl at Providence has frequently spat what appeared to herself and to others to be pure urine. She has likewise discharged it from her eyes as shall be mentioned by and by.

Urine has been poured into some of the cavities of the body. It is very evident that when a great diminution takes place in either the fluid evacuations or secretions for any length of time, an accumulation of fluid must take place in some of the cavities of the body, provided no vicarious discharge is substituted for the suppressed one. Cases of this kind are so common, and the fact so obvious, that it is superfluous to refer to authorities for a confirmation of the truth of the position. It has, however, been seldom suspected that these accumulations, in consequence of suppression, have been formed by the urine itself. The examination of bodies after death has clearly proved this, and it is a fair belief founded on analogy, that in dropsical swellings, arising from ischuria, the effused fluid partakes of the qualities of urine. In those cases of ischuria in which, after the secretion, the suppression occurs, it appears very probable, when a considerable accumulation of dropsical swellings takes place, the suppression continuing, that the effused fluids will be found more or less affected by a urinous impregnation. In the majority, if not in the whole, of the cases published by Dr Home, great hydropic swellings took place: in one case, a spontaneous diarrhœa supervened, and carried off the swellings, notwithstanding which the ischuria continued and ultimately proved fatal. In a letter of Dr Fittich to Dr Firkman, published in the correspondence of Horstius, it is remarked, in a case of suppression of urine of about three weeks continuance, 'interim toto corpore, maxime vero venis admodum turgidis, quæ ex levi frictione multam aquam resudabant, in quo difficillima et gravis mors ex suffocatione et tumore totius corporis secuta.' Haller too makes observations to the same effect. 'In cellulosæ telæ cavernulas lotium decessit in exemplo, in quo œdema urinosum ischuriæ supervenit.' Sauvages has given the name of anasarca urinosa to those cases, and states, that in one of this kind the swellings were so extensive as to rise to the neck, 'tumor universalis ad collum usque sensim ascendens,' and that the patient recovered, discharging urine copiously, with fainting. The supposition that a urinous deposition might take place in these and similar cases, is strengthened by the dissection of a body by Morgagni. A young man died on the 21st day, after having laboured under a suppression of urine, and swelling of the whole body during that time. On examination, the bladder and kidneys were discovered to be sound: the former contained about two pints of urine. In the cavity of the abdomen was found a fluid that smelt like urine, though limpid in appearance. This fluid, being preserved in a glass vessel, separated into many broken parts, like those generally contained in urine. Dr Lister mentions a man of fifty, who, being seized with ischuria, an immense swelling of his belly took place. A catheter was introduced, but there was no urine. Diuretics with purgatives cured the man.

Urine has been found in the ventricles of the brain of those persons who have died of ischuria. 'In some rare instances of coma after ischuria,' says Dr Cheyne, 'it would appear as if the vessels of the brain assumed an action similar to the healthy action of the kidneys; fluids, with the colour and smell of urine, having been observed in the ventricles of the brain;' and gives the following quotation from Portal: 'J'ai reconnu l'odeur d'urine dans une epanchement d'eau qui s'etoit fait dans les ventricles du cerveau d'un homme mort d'une suppression d'urine.' And Haller says from Boerhaave, 'In cerebri ventriculis, post symptomata affecti encephali aqua urinae faetore, vitiosa, reperta est.'

Urine has been deposited in considerable quantities in the Stomach.—Cases of this kind are numerous; so much so, that Sauvages has formed a species in his nosology under the name of Vomitus Urinosus. We meet with this in the writings of Vander Wiel, Horstius, Haller, Morgagni, and many others, down to the authors of our own days, and the urine has been thrown up from the stomach for a considerable time, sometimes incorporated, and at other times pure and unmixed, with the contents of the stomach. An elderly gentleman laboured under a suppression for sixteen days, in consequence of calculi: 'interea tamen' says Vander Wiel, 'per illos dies ipse prae nimia oppressione urinaeque impedito exitu hanc, et salsissimam, aliquoties vomitu ejecit.' Horstius relates a very singular case, in a letter to Dr Firkman, physician at Worms:—'Pueri quem ante 9 vel 10 circiter annos Darmstadii vidi, qui, pene testibusque penitus carebat, cute istius loci totaliter consolidata, quem defectum puer ex morsu porci dicebatur habere, quo primo aetatis anno genetalia penitus ablata fuerunt, ex incuria post, membro isto totaliter consolidato. Hic puer annorum circiter 12 tunc temporis, ubi Darmstadii a me videbatur candide referebat quod quotidie bis compressionem aliquam circa regionem vesicae sentiret, subsequenti mox vomitu salsae aquae.' About the time of the publication of this work of Horstius (1620,) the attention of the profession was a good deal excited in Germany, respecting a singular case, which employed the pens and exercised the ingenuity of the first physicians and surgeons of the day. A poor woman fell with a stick of wood in her hand in such a manner, that she inflicted a severe wound upon the passages leading to the uterus and bladder. Either from poverty or modesty, or both, she failed to apply for surgical aid; the consequence was, that a complete union of the parts took place from adhesive inflammation; after which she vomited up, and passed her urine per anum. Upon this very singular case a long correspondence took place between Drs Fittich and Firkman, physicians at Worms, Dr Horstius of Ulm, and the celebrated Fabricius Hildanus, surgeon at Bern. Great doubts were entertained of the fact; the consequence was, that Horstius minutely examined the girl, with Adam Stoss, a surgeon, to ascertain the truth; and with the intention also, if possible, of dividing the coalesced parts, and renewing the natural passages of the urine. On inquiry the facts were found as stated; and, upon consultation, the operation was thought too hazardous to be attempted. The poor girl was therefore left to her fate. No discovery was made of any passage for the urine from the bladder to the rectum, as Hildanus very judiciously stated might be the case. He did not, however disbelieve the fact; for, in the letter mentioning this as the probable outlet, he states the case of a girl, who, from an obstruction at the neck of the bladder, passed her urine at the navel; and of a man who, from the same cause, passed it per anum. Four years after the accident, the poor woman was still living, and passing both her urine and menses per anum. It would appear that Horstius had requested Dr Muller to keep his eye upon the woman, for he thus writes to Horstius: 'Statum, istius mulieris in pudendis vulneratae, quem pro tempore, post tot annos scire desideras, talis est, qualem reliquisti. Vivit adhuc sed misere satis, sicut ex ore ipsius proprio intellexi, nec aliter urinam atque menses quam per alvum, saepius non absque gravissimis doloribus, excernit, muliebribus penitus adhuc consolidatis.' Haller, too, refers to several great authorities for cases of urinous vomiting. One of our own profession was afflicted with this nauseous disease. The celebrated French surgeon Lanfranc suffered under it. 'Eadem (says Haller) quae per alvum, urinae via etiam ad ventriculum ducit. Celebris olim chirurgus Lanfrancus ipse, cum calculo laboraret, lotium vomuit. Laweria illa, olim per suum morbum notissima, aliquoties urinam vomitu reddidit.' Similar cases are published in the History of the Royal Academy of Sciences at Paris in the year 1715. They are the cases of a nun and a monk. The former, after having been long harrassed with hysterical complaints, was seized with a suppression of urine which lasted forty days, during which she vomited that fluid. At the end of this period the urine returned to its natural channel. The urinous vomiting, however soon recurred, and had continued thirty-two days longer, when the acconnt was drawn up by Dr Marangoni, physician at Mantua. A very remarkable circumstance in this case is, that the urine was vomited unmixed with the food, although the vomiting sometimes occurred soon after her meals.

Vallisneri, as Morgagni states, saw a girl who, after the tenth day of suppression, vomited a fluid of the colour, taste, and smell, of urine; she lived some time in this way, till it occurred to Vallisneri to have recourse to mercury to overcome the obstruction, and it had the desired effect. Also, says Morgagni, another physician saw a woman, labour under this suppression and vomiting for fifteen months, till the calculus being discharged, the ischuria and vomiting of urine went off. A great number of similar instances might be given were it necessary, and if any one will take the trouble of turning over the pages of Morgagni, Haller and Sauvages, his curiosity will be amply gratified. Similar cases of a more recent date are to be found in various medical papers. In the 51st. volume of the Philosophical Transactions for 1759. Dr Dawson gives an account of a girl twenty three years of age, who laboured under a suppression of urine for upwards of fifteen months; during which time there were œdematous swellings in the limbs, abdomen, hips and face; but by the help of purges and spontaneous vomitings, which began in the third month of the suppression, these swellings were tolerably kept under. She vomited sometimes every day, and sometimes only every third or fourth day; and though these vomitings usually came on presently after dinner, yet what she vomited seemed to be mere urine, without any thing, which she had eaten, being mixed with it. About thirteen months after the suppression took place, the nipples of her breasts chopped and discharged sometimes a watery humour, sometimes a thick matter streaked with blood, and sometimes a humour approaching to the colour of urine. All these discharges had an urinous scent, and seemed to lesson her urinous vomitings, which from this time became less frequent. Dr Cheyne says he saw a girl in 1797 who vomited at stated times, a fluid with all the sensible qualities of urine; the discharge by the urinary passage having long been suspended. A very accurately drawn up case of ischuria, attended with urinous vomitings, will be found in the Transactions of the College of Physicians of Philadelphia, by our own countryman Dr Isaac Senter, of R. I. The following is an abstract of the case.

A young woman, after having been in a bad state of health for about a year from sympathetic irritation of the lungs, in consequence of diseased stomach, at times vomiting blood, was seized with a suppression of urine, accompanied by such an irritable state of the stomach, that nothing remained upon it but solid opium for ten weeks. On the sixth day of the suppression. she brought up urine from the stomach, with which was subsequently mixed gravelly matter. I saved, says Dr Senter, the water that she brought up this way, and compared it with what I drew off, and found it the same in every respect. The urinous vomiting continued for three years, during which it passed at times per anum and at others from the navel. The water was frequently drawn off by the catheter, which relieved the soreness felt at the lower part of the belly. Sometimes, although the catheter remained in the bladder for a whole night, no urine at all would come away, although she was throwing it up in considerable quantities from the stomach. Many other symptoms of extreme distress harrassed this patient. She was at one time paralytic; her frame was shook with convulsions; there was occasionally a vomiting of bloody pus; gravel as well as urine, was also discharged from the stomach, and, in comparing this gravelly matter with the gravel which came from the bladder by the instrument, I could observe, says Dr Senter, no difference either in the colour or consistence of them. It is worthy of remark, that, during this girl's illness, she twice passed a small quantity of urine through the urethra, in consequence of being frightened once by thunder, and the second time by the falling of a window in her room. These were the only times, during the three years that the ischuria prevailed, that she passed urine by the natural passages, except with the assistance of the instrument; and, notwithstanding a considerable quantity of urine was thus repeatedly drawn off, the relief obtained made no permanent impression on the urinous vomiting, as the urine continued to be thrown up from the stomach to the period of her dissolution. On examination of the body after death, although a great deal of disease was seen, no discovery was made of any channel by which the urine could pass from the bladder to the stomach. In addition to these instances of urine being thrown from the stomach, I will add, that the patient at Providence likewise has, and does now discharge urine in considerable quantities from this organ.

The intestinal canal, a portion of which is the great reservoir of excrementitious matters, forms also a vent from which urine is discharged when the natural outlet to that secretion has been obstructed; and this takes place when there has been no opening formed by ulceration between the rectum and the bladder. 'Puer duodecim annorum,' says Baglivi; 'postquam per septem dies urinae suppressione laborasset, eandem demum excrevit per alvum et sanavit.' Early in the month of January 1787, says Dr Senter in his case, (which I have already mentioned,) from some cause unknown, she could not be relieved by the instrument, nor could she vomit up her urine for several days, when it passed off by the navel for three days successively. Early in the spring, 1789, her urine began to pass per anum, loaded with the same kind of gravel that had come away by the catheter. Groenvelt, who, I believe, was prosecuted for prescribing cantharides internally, also relates instances of the discharge of urine per anum. 'Cum duodecimo die,' says Haller, quoting Groenvelt. 'suppressae urinae jam gravis lethargus ingenerit, urina multa per alvum cum levamine egesta est;' and, undoubtedly, if this state of stupor had not been removed by the discharge of urine per anum, it would have been poured out upon the brain, to relieve the turgid vessels within the cranium, and the patient would have died apoplectic. Cases of a similar kind are given by Pechlin and Rhodius. 'Vidi senem quendam,' says the celebrated Hildanus, in a letter to Horstius, 'urinam omnem per podicem sine insigni molestia excernentem, in quo post mortem, ductum urinarium circa sphincterem scirrho occlusum esse reperi.' Morgagni, after relating several cases of the discharge of urine per anum, where no passage could be discovered between the rectum and bladder, adds, 'but lest it should be supposed that some mark of preternatural perforation might have been overlooked in these cases, attend to what the celebrated Reusnerus relates of a case; there was no urine in the bladder which could make its way by force into the intestine, and yet, on the seventh day after the ischuria, urine which was similar to what is naturally excreted in colour, smell and quantity was discharged from the intestines, without any discharge of the intestinal faeces at the same time, without any pain or alteration, and that three or four times for some days together, till all of a sudden it was again discharged by the penis, without the least pain or troublesome symptoms.' Here not only was the urine thrown off from the intestines, but it came away perfectly free from faeces. Morgagni naturally enough could not easily account for this; he, however, did not dispute the fact; for he immediately, from his own knowledge, relates the case of a priest, 'endued with an excellent natural disposition, with a probity worthy of his office, and with manners that were always exemplary,' who for a long time passed his urine per anum: and 'this fluid, which generally flowed from the intestine without any of the excrements, continued to flow from thence even to the day of his death, which was brought on by quite a different cause.' Numerous other cases are scattered through various medical works which might be noticed, but I shall pass by them, and proceed to notice the one which I have frequently alluded to, and which now exists in the person of a coloured girl of Providence R. I.

The account of this case must necessarily be general, and imperfect, as what I relate was gathered from the verbal reports of those gentlemen who habitually attended her, and from the few observations made by myself during my occasional visits to her, in company with Dr Arnold her present physician. From these sources I learn that the patient is a native of the town in which she now resides, that she has been a girl of industrious habits, and that she has always maintained a character free from blemish. Her employment has been somewhat laborious, but her health had always been good, until the beginning of the year of 1822, at which time she was attacked with a severe cold, which gave rise to a troublesome cough and pain in the side. These complaints increasing she called in medical aid. A course of depleting remedies was immediately prescribed, which was carried to a great extent. During this course an emetic was administered which operated powerfully and occasioned a suppression of urine. All power of contraction seemed to have left the bladder. This suppression has continued until the present day, during all which time art has been resorted to daily in order to evacuate the urine. After having continued sometime in this state, and being somewhat alarmed, she dismissed her physician, and passed into the hands of several others, and at last came under the care of Dr Arnold.

About six months from the commencement of her disease, the introduction of the catheter to empty the bladder was, from some unavoidable circumstance, omitted for the space of forty-eight hours. At this period she experienced some unpleasant sensations about the head; such as a slight degree of fulness about the forehead and eyes, attended with a slight vertigo. These sensations were soon followed by a discharge of several ounces of a yellow coloured fluid from her right ear. This fluid had all the sensible properties of perfect urine. This at first flowed off very irregularly, but it soon came off in regular daily discharges of considerable amount. At the commencement, and for several months after the occurrence of this discharge, she was afflicted with delirium and hysterical convulsions. These were most severe just before the fluid passed off. In January 1823, about a year from her first attack, she complained of nausea, which continuing for a few days, was followed by vomiting of very perfect urine, in large quantities. A few weeks after this time, her right breast became very hot, and much distended, attended with a good degree of pain. Those symptoms were very soon followed by a discharge from the nipple of a number of ounces of fluid, resembling in all respects that which came from the bladder, ear, and stomach. In a short time her left ear became painful, and urine soon flowed from that also. Sometime in the following February her left breast became the outlet for urine. Not long after this passage became well established, or during the month of February or March, she was attacked with violent and spasmodic pain and contractions in the region of the umbilicus. In a day or two a very distinct noise was heard in those parts which to use the patient's own words 'was similar to that produced by withdrawing a cork from a bottle.' Immediately after this noise was heard, urine flowed from the navel. The surface of this patient's body has, during almost the whole of this time, been bedewed with this peculiar fluid. It has also issued from the salivary glands, and from the right eye. All these organs, viz. the ear, breast, stomach, navel, skin, salivary glands, and the right eye continued for a considerable length of time, to be outlets of this fluid. And the right ear, the breasts and navel have now for nearly three years been the daily outlets for it. Urine has also flown into the bladder in different quantities during all this time, and been evacuated from that organ by the catheter. It should be observed that when the quantity thrown out of the system at these foreign outlets was great, that passed from the bladder was small, and vice versa. The hearing of the right ear is entirely destroyed, as is also the sight of the right eye. The urine which flows from the breast and navel oozes from them drop by drop, while that which flows from the ear, comes away all at once, as if it were contained in a large sack or cavity, but notwithstanding this no enlargement is to be observed in the region of the ear or face. Portions of the urine which passed off at the ear, breast and navel I have analyzed, and I found it to contain all the common principles and properties of pure, simple urine which flows from the natural outlet. During the first year of her complaint this patient suffered much from pain, and debility. Her appetite was poor, and her whole digestive system was very much disordered. She has, however, gradually recovered from her constitutional affection, so that she is at the present time and has been for the last summer, able to ride, and walk some distance, and perform some light work. And this she does without any diminution of the above phenomena. This is probably the most extraordinary case of the kind that has ever occurred. I can find none upon record which can compare with it. There is then no longer any doubt but that cases of wandering urine have existed, and that the cases have been numerous; sufficiently so to justify Dr Good in introducing this disease as a species into his Nosology.

The interesting inquiry, how does this fluid find its way to these foreign outlets? now offers itself for our consideration. The present state of Anatomical and Physiological facts and discoveries will allow us to conceive of three ways, and three only, by which urine may thus be discharged from the system. They are the following. First.—The urine, after it has arrived into the bladder, may perhaps be absorbed from that organ by its lymphatic vessels, and then be taken up from these vessels by other lymphatics which anastomose with them, and carried by a backward or retrograde action of these vessels to the part at which it is to be discharged. Second—the urine having been secreted by the kidneys may possibly be absorbed by the lymphatics, and conveyed by them into the general circulating system, and then be carried to the unnatural outlets by the arteries of these parts. Or Third—The urine may possibly be formed by the extreme vessels which naturally convey blood, supposing them to take on a new action, or one similar to that of the extreme vessels of the kidneys which naturally secrete urine. These are the only ways in which these singular phenomena can take place consistently with our present knowledge of the human system. It has been supposed indeed, that there is a direct communication between the stomach and the bladder, but the minutest anatomical researches have never detected this communication, and there is no evidence that such a communication exists; and even if it did exist, it would account only for the discharge of urine from the stomach and intestines, those from the other outlets would still be unaccounted for. But there is not even a probability that there is such a communication. And we must therefore look to one of the three mentioned hypotheses for a solution of this interesting inquiry. Each of these has been suggested by authors; and a consideration of each will now occupy our attention. The two first of these hypotheses necessarily supposes a secretion of urine by the kidneys; and a very active agency of the absorbent system. The third supposes neither of them, and is independent of any action of the kidneys, and of any direct agency of the absorbents. This system of vessels, which is now known to perform an important office in the animal economy, was discovered about two hundred years since by Asellius. His discoveries were confirmed and extended by many later Physiologists, by 'the researches of Pecquet, Rudbeck, Jollyffe, Batholine, Glisson, Nuck and Ruysh, till by the concurrent and finishing demonstrations of Hoffman and Mekel, and more especially by the distinguished Hewson, the elder Monro, both the Hunters and Cruikshank, the whole of this curious and elaborate economy, was completely explained and illustrated towards the close of the preceding century, and the opposition of Baron Haller was abandoned.' The researches of these distinguished physiologists teach us that this system of vessels is extensive, that they take their rise from every part of the body both within and without, that they all converge to one common centre namely, the thoracic duct; that in every part they are supplied with numerous valves; that they, in their course to the thoracic duct pass through many glands, and that their office is to take up the materials which have ceased to be useful to the system, and convey them into the general circulation in order that they may be thrown out of the body, or again be converted for its sustenance. Now it is upon the supposition that this system of vessels is capable of taking upon itself a retrograde action, and by this means giving to its fluid a backward motion that the first of the three above mentioned hypotheses is founded. This supposition was advanced by Mr Charles Darwin, and was supported in an 'essay presented to the Æsculapian Society of Edinburgh in 1778, that obtained for him an unanimous grant of the prize-medal for the year.' At the time he wrote this essay, the disease called by Dr Good, Paruria Mellita, or Saccharine Urine, was the subject of much controversy among physicians. It was the opinion of Mr Darwin that the saccharine matter which was frequently detected in urine, was formed by the digestive organs, but he saw that if this sugar was formed by the digestive organs, it must pass into the blood, and might be detected in it. Experiments, however, convinced him that the blood contained no such matter. It was, therefore, to get over the difficulty of this absence of sugar from the blood, in cases of saccharine urine, that he was led to adopt the opinion that the absorbent system sometimes assumed a retroverted action. If he could give to the lymphatics, thought he, a retrograde motion, then the reason why sugar was never detected in the blood during the disease of saccharine urine, could be easily explained, for then the sugar being formed by the digestive organs, and conveyed with the chyle into the lacteals would be absorbed from these vessels by the retrograde action of the urinary lymphatics and conveyed by them directly into the bladder, without ever having entered the circulating system. He therefore attempted to prove, in the above mentioned essay, that the absorbent vessels were capable of and that they did in reality sometimes take upon themselves this backward action. His arguments in support of this opinion are ingenious and highly interesting, and ought properly to be introduced here, but their length prevents. They may be found in extenso in his father's Zoonomia. I shall however, as I proceed, have occasion to mention a number of the most specious of them. Having endeavoured to establish the general principle of a retrograde lymphatic action, he proceeds to remark that all the branches of the lymphatic system have a certain sympathy with each other, insomuch that when one branch is stimulated into unnatural kinds or quantities of motion, some other branch has its motions either increased or decreased or inverted at the same time. Thus when a man drinks a moderate quantity of vinous spirit, the whole system acts with more energy by consent with the stomach and intestines, as is seen from the glow on the skin, and the increase of strength, and activity; but when 'says he' a greater quantity of this inebriating material is drunk, at the same time the lacteals are quickened in their power of absorbing it, the urinary branches of the absorbents which are connected with the lacteals by many anastomoses, have their motions inverted, and a large quantity of pale, unanimalized urine is hereby discharged. 'Where' continues Mr Darwin ' this ingurgitation of too much vinous spirit occurs often, the urinary branches of the absorbents at length gain a habit of inverting their motions whenever the lacteals are much stimulated; and the whole or a great part of the chyle is thus carried to the bladder without entering the circulation, and the body becomes emaciated; while the urine is necessarily sweet and of the colour of whey.' Upon the same principle would Mr Darwin account for the phenomenon of wandering urine. and a number of other diseases. The whole of this simple and ingenious explanation depends upon a mere supposition, a supposition supported by no direct facts, or experiments, and against which the structure and office of the absorbents seem to present a fatal objection. The greatest obstacle, indeed, which he meets with in proving his opinion, is the numerous valves which are every where placed in these vessels. And he can get over this only by supposing that these vessels are diseased in some way or other, and thus rendered incapable of performing their accustomed office; that these vessels may, in consequence of their irritability, be, (to use his own words.) so 'stimulated into unnatural exertions that during the *diastole* of the part of the vessel to which the valve is attached, the valves may not so completely close, as to prevent the relapse of the lymph or chyle.' Or that the valves may 'become paralytic' and thus present no obstacle to the passage and repassage of the fluid, any more than so many lifeless films of membrane would. But supposing either of these diseased states of the lymphatics really to exist; would they account for a retrograde motion of the fluids in them? On the application of a stimulus to an highly irritable lymphatic vessel, what would be the peculiar resulting action of that vessel? Would it be that of dilatation? would it not rather be that of continued contraction; and thus instead of separating the valves from each other so as to permit a repassage of the lymph, it would have the effect of closing them more securely and strongly, and offer a greater barrier to the repassage of the fluid, than they offer in their natural and healthy state? It is reasonable to think that it would. It would appear that Mr Darwin, in offering this solution, was under the impression that the fluid in the lymphatics was propelled through them by a vis a tergo, and that these vessels were endowed, like the arteries with the powers of contracting and dilating, for he says 'that during the diastole of the part of the vessel to which the valve is attached, the valve may not so completely close, as to prevent the relapse of the lymph or chyle. 'If indeed the absorbents did contract and dilate like the arteries, then there would be some force in Mr Darwin's argument. But who does not know that they possess no such power? and that their fluid is urged along by laws entirely different from those which urge the blood through the arteries? What these laws are we do not exactly know; but from many circumstances they appear to be analogous to those which govern the circulation of the black blood, whatever they may be. The supposition then of a diseased irritability of these vessels, even if it was true, would not, I think, aid Mr Darwin in surmounting the difficulty which is presented to his opinion by the lymphatic valves.

Nor will a palsied state of the valves explain the difficulty, any more than an increased irritability of their vessels would. For supposing an attack of the palsy should seize these valves, and render them lifeless, would not the vessel in which they are placed be also affected, and even fatally by it? Is it possible for the valves of a lymphatic to be diseased, and lose all their powers of action, without the lymphatic itself being also affected? We know that the valves are extremely numerous, being sometimes not a sixteenth of an inch from each other; that they are formed by the inner coat of the vessel, and that they are distributed in pairs in order to form a perfect closure to the vessel. The materials, then, of which they are composed, must be nearly or quite equal to those which compose the lymphatic vessel itself. Now can it be possible for all these valves to be palsied and loose all their powers of vitality and of action, without the lymphatic itself, in which they exist, and of which they are, in fact, a part, being diseased in the same manner? I think not. And if not, then we cannot conceive the possibility of this retrograde action; for such an action would require an extraordinary degree of vitality and of motion, a degree much greater than they possess in their natural and healthy employment. If then we admit with Mr Darwin that the valves may be so palsied as to offer no resistance to the passage of fluids through them in either direction, we must, I think, also admit that the lymphatics themselves must be so diseased as to be incapable of pushing forward their fluids, and therefore his argument destroys itself, and amounts to nothing. What Mr Darwin has said to prove that the valves present no obstacle to the regurgitation of the lymphatic fluid is mere opinion; and indeed whatever can be said in support of such an idea must be merely hypothetical. He has, however, endeavoured to support his opinion by facts and analogy. This opinion, he says, 'is rendered more probable by the experiments of injecting mercury, or water, or suet, or by blowing air down these vessels—all which pass the valves very easily, contrary to the natural course of their fluids.' But it must be recollected that we are treating of animate not of inanimate vessels. These things we all know may take place, after all life and animation has left the vessel—for, then, the lymphatic may be distended and enlarged like any other thin and lifeless membrane, and its valves may float in either direction—but I deny that these things can take place in the living vessel. The laws which govern living and dead matter are entirely different—and it will not do, therefore, to reason concerning the phenomena of the living body, from those which take place in the dead. Physiology has suffered much from this kind of reasoning; and many erroneous opinions have crept into medical works in consequence of it. But, says Mr Darwin, 'there are valves in other parts of the body analogous to those of the absorbent system, and which are liable, when diseased, to regurgitate their contents,'—from which he would argue that the valves of the absorbents might do the same. He refers to the valves of the alimentary canal, and of the veins. It is true that the alimentary canal does frequently take upon itself a retrograde action, and that its valves do permit its contents to regurgitate through them. But this canal bears no analogy to the absorbents. Its structure, its action, and its office is totally different from those of the last named vessels. The retroverted action, which the alimentary canal frequently assumes, may be considered a part of its natural action. Nature foresaw the necessity of such an action, and constructed the organ in such a manner that it might easily and safely take it on. The veins, it is true, do in many respects resemble the absorbents, and they certainly bear a far greater analogy to them both in their structure and functions than the alimentary canal does; but still this resemblance is not sufficiently identical to warrant us in the conclusion, that the phenomena which take place in the veins might also take place in the absorbents: that even if Haller did see the blood, during the dying struggles of an animal, repass the valves of the veins, this resemblance, I say, is not sufficient to warrant us in the conclusion, that the same thing would take place in the absorbents. For, in the first place, the valves of the absorbents are far more numerous, and much nearer to each other than the valves of the veins are. And, in the second place, the absorbents are furnished with a system of glands, of which the veins are totally destitute. These glands, it appears to me, must offer a great resistance to the regurgitation of fluids through the lymphatics—a resistance, indeed, nearly or quite equal to that of the valves themselves. An obstacle when united with that which the valves present must form a complete and perfect barrier to the repassage of this fluid. Besides, might not Haller have been deceived in his observations? Might not the blood have *appeared* to have repassed the venous valves, during the struggles of the tortured animal, when, in fact, it did not repass them? I think it might from these considerations; first, if we let a stream of any liquid run gradually through a flexible tube having valves, and stop it suddenly by placing our finger upon the end, at which it is issuing, a motion will be communicated to the fluid, which would give to it the appearance of flowing back. And, secondly, if we place our hand upon some prominent vein of our arm, and suddenly stop its blood from circulating, we shall see an apparent, though momentary, regurgitation of this fluid. What, therefore, Mr Darwin has said respecting the analogy of the alimentary canal and veins to the absorbents offers little or no support to his opinion of the retrograde action of the latter set of vessels. Nor does the fact of the 'retrograde motion of vegetable juices' prove more; for the motions of vegetable and animal fluids in their respective vessels depend upon very different laws—the former depending upon mechanical principles, while the latter depend upon laws peculiar to animal life. Indeed, in whatever light we view the arguments in favour of the retrograde action of the absorbents, we meet with difficulties, difficulties which are insurmountable, And even by admitting that these vessels can, and do take on such an action in cases of saccharine and wandering urine, still I do not see how, in the last named disease, the urine can easily pass from the bladder to the ears, eyes, mouth, &c. Mr Darwin would say it passes by means of the branches of the urinary lymphatics anastomosing with those which belong to the ear, eye. &c. &c. But where do these anastomoses take place? Few only of them are observed after the lymphatics have proceeded far from their origin, and passed through their glands; and even if they were frequent, still they would take place at such acute angles that it would not be possible for the fluid of the urinary lymphatics to pass into those which come from the ear, and other distant foreign outlets. The fluid then must pass from the bladder to the ear, eye, salivary glands, &c. through the anastomoses of the extreme branches of these vessels; and must therefore proceed in innumerable zigzag directions, and take a long circuitous rout, and pass through the extremities of the lymphatics of nearly one half of the body, in order to arrive at the ears, eye, &c. circumstances, which, to me, appear impossible. Besides, the effects which would necessarily result to the animal economy, from such a regurgitation of urine, must prove this hypothesis to be false. In the case of the coloured girl at Providence, the urine, as has been already observed, passes out at the ear, eyes, salivary glands, stomach, breasts and navel; the consequence must, therefore, be, if this hypothesis is true, that all, or nearly all of the lymphatics of at least one side of the body must have this retrograde action, and must be filled with this corroding fluid, not indeed for an hour, or a day only, but for months and years! Is this possible? And if it is, what becomes of the matter which it is the natural office of these absorbents to carry off! What becomes of the fluids which are constantly thrown forth by the secretories during all this time? And how shall we account for the emaciation of the body? These considerations, I think, must convince every one of the falsity of

Mr Darwin's hypothesis. But farther; even admitting the truth of it, still it would not, in all cases, explain all its author expected. It would, it is true, explain the phenomena of saccharine urine and also those of wandering urine, after this fluid has been secreted by the kidneys. But there are cases upon record of urine being passed off at foreign outlets, without its ever having been secreted—the kidneys being wanting, or destroyed by disease. How shall we account for these? Certainly not upon Darwin's theory; for that is founded, and must necessarily be, upon the principle that the urine is first secreted. These considerations, then, induce me to reject this hyposis as false. It has never been supported by any direct experiments either by its author, or any other person, and therefore has never obtained any higher character than that of an hypothesis. 'And,' to use the language of Dr Good, 'how much soever it may have been caught up hastily by men of warm imaginations, or those who are fond of novelty, the soberer physiologists have never been made converts to it.' 'Even Dr Wollaston,' continues Dr Good, 'prefers a state of doubt concerning this theory, notwithstanding the ready solution it offers to his experiments.' 'With respect to Dr Darwin's conception of a retrograde action of the absorbents,' says Dr Wollaston, 'it is so strongly opposed by the known structure of that system of vessels, that I believe few persons will admit it to be in any degree probable.'

If, then, the phenomena of wandering urine cannot be explained upon this hypothesis, can it be in the second way proposed? which is, that the urine having been secreted by the kidneys may possibly be absorbed by the lymphatics, and carried by them into the general circulation, and then conveyed to the unnatural outlets by the arteries of those parts. Now, although these phenomena may, I think, be explained far more satisfactorily upon this principle than upon that of Dr Darwin, still this hypothesis is open to many objections—objections which are irreconcilable with its existence. I do not, indeed, see any great objections to the supposition that the urine may be taken up by the absorbents, after it has been secreted by the kidneys, and then carried into the circulation; and that the absorbents do perform this office with regard to other fluids and substances of the various parts of the body is beyond a doubt. Nor do I perceive any material objection to the supposition that the urine, after having arrived in the circulating system, may be carried to these foreign outlets by the arteries of those parts. This, indeed, presupposes some alteration in the organic sensibility of these arteries, in order to adapt themselves to the stimulating qualities of the urine—a fluid very different from the blood which they have been in the habit of transporting. But that such an alteration may take place in the sensibility of the arteries, almost every day's experience fully proves. We well know that the arteries do often carry in them fluids and substances differing essentially from those of the blood. I, therefore, do not object to this second way of explaining this subject, in so far as regards the powers of the absorbents and extreme arteries. But the great objection to the adoption of this hypothesis is, that it supposes the urine may be contained and carried forward in the circulation without any material bad effects arising to the system. This supposition, and of course the second hypothesis, I cannot assent to for the following reasons: First, the urine is an excrementitious fluid, which is destined to be thrown out of the body. It is a recrement from which nature has taken peculiar pains to free the system. Every animal being is provided with an apparatus for this purpose; and when this is wanting, as in some few instances it is, then nature employs some other organs of the animal economy to perform this office—as the perspirative organs, the alimentary canal, &c. When, therefore, we find nature so careful to relieve the system of the constituent principles of urine, we cannot, I think, easily imagine that this fluid can, in its combined and concentrated state, pass harmlessly into every part of the circulating system, in so large quantities as it must in the case of the coloured girl at Providence, if this hypothesis be true.

In the second place, the effects which uniformly result from a suppressed secretion or destitution of urine, prove most clearly that this fluid, or even its ultimate elements, cannot, for any length of time, be contained in the body. There is no disease more dangerous than that of suppressed secretion of urine. There is no complaint which requires a more speedy assistance: and there is no one more surely fatal, unless relief be obtained in the course of the first thirty hours of its existence. The secretion of the bile, saliva, milk, and in fact every other secretion of the body, may be suppressed for a very considerable time without producing death, or any very serious effects. But a suppressed secretion of urine generally proves fatal in a very few hours. This circumstance proves the necessity and importance of this evacuation, and that the urine conveys from the body some poisonous and destructive principle. 'Let it not be supposed,' says Dr Good, 'that so important a recrement as the urine is, can have its constituent principles remain behind, and load the blood without danger.' 'The effects that result from a retention of the urinary elements in the system,' continues this author, 'are a loss of energy and a growing torpitude in every function, proving that the sensorium is directly debilitated, and rendered incapable of secreting its proper fluid. It is, hence, to be expected that the brain should evince torpitude in a greater degree than any other organ, and become oppressed and comatose, as though in a state of apoplexy. Nor is it difficult to account for these effects, since they naturally follow from having the blood surcharged with that excess of azote, which it appears to be the office of the urine to carry off. The destructive power of azotic gas to animal life is known to every one, as is also its further power of increasing the coagulability of the blood.' The great and pressing danger of having the constituent principles of the urine thrown back into the blood has been very particularly and distinctly pointed out by Sir Henry Halford, in these words: 'A very corpulent, robust farmer, of about fifty-five years of age, was seized with a rigor which induced him to send for his apothecary. He had not made water, it appeared, for twenty-four hours; but there was no pain, no sense of weight in the loins, no distention in any part of the abdomen, and therefore no alarm was taken till the following morning, when it was thought proper to ascertain whether there was any water in the bladder, by the introduction of the catheter, and none was found. I was then called, and another inquiry was made, some few hours afterwards, by one of the most experienced surgeons in London, whether the bladder contained any urine or not, when it appeared clearly that there was none. The patient sat up in bed and conversed as usual, complaining of some nausea, but of nothing material in his own view; and I remember that his friends expressed their surprise that so much importance should be attached to so little apparent illness. The patient's pulse was somewhat slower than usual, and sometimes he was heavy and oppressed. I ventured to state that if we should not succeed in making the kidneys act, the patient would soon become comatose and would probably die the following night; for this was the course of the malady in every other instance which I had seen. It happened so; he died in thirty hours after this, in a state of stupefaction.' Such I believe would always be the result of a suppressed secretion of urine, unless nature or art should interfere and give relief. In the third place, this hypothesis is most decidedly refuted by experiments. Substances of almost every kind have been injected into the arteries and veins of various animals by different physiologists. The effects of these experiments were as various as the substances which were injected. Some proving immediately fatal, while others were perfectly harmless. Urine was one of those fluids which uniformly proved fatal. All the other secretions of the body could be thrown into the circulation without very great or speedy mischief. But the urine whether in a diluted or concentrated state, generally destroyed life. Death always followed the injection of this fluid into the carotid arteries; and, with but few exceptions, it took place when urine was thrown into the veins. And even these exceptions were, most probably, the consequences of some error in the experiments.

A consideration of the properties of urine would, indeed, lead us to conclude, a priori, that such would be the effects of having this fluid thrown back into the system. The urine, we well know, is a highly irritating, and sometimes, particularly when it has for a considerable period remained in the bladder, is also a highly corrosive substance. Who does not know the pain which this fluid causes even in its most diluted state, when poured upon an inflamed surface? Have we not all read that urine, when infused into the cellular membrane, produces inflammation? And who can be ignorant of the fact, that urine will often act as a vesicatory upon the surface of some patients' bodies? Now can it be imagined that a fluid which produces such effects upon inflamed parts, in the cellular membrane, and upon the cutaneous surface, which surface, in consequence of its relation to external bodies, must of necessity have lost a good degree of its sensibility and irritability, and which, also, is so disconnected with our vitality—can it be imagined, I say, that such a fluid as this may come in contact with such irritable organs as are the brain, the heart and blood vessels, organs on which our vitality immediately depends, without producing death or any unpleasant consequences? It is impossible. We know that so mild a substance as castor oil cannot, in so minute a quantity as half-an-ounce, enter the circulation without producing very dangerous effects; as has been proved by experiments performed by a distinguished physician of this city, upon himself. We know, likewise, that venous blood cannot circulate in the arterial system, nor come in contact with the brain through the medium of the carotid artery, without producing death. If, then, so mild a fluid as castor oil, and a fluid so nearly related to arterial blood as venous blood is, cannot pass through the system without causing such deleterious effects, can we for a moment believe that a fluid so unlike arterial blood, and of such a character as urine, may pass without injury through the whole circulating system? No one, certainly, can believe it. It has been the belief, however.

of many physicians, and it was the opinion of Dr Yeats, as expressed in his paper on Ischuria, that the urine could form part of the circulating fluid without manifest injury, and that it must in order to explain the cases of wandering urine. But had these gentlemen considered for a moment the properties of this secretion, and the fatal effects attending its suppression—had they known the consequences of injecting this fluid into the blood vessels, and had they at the same time observed how particular nature has been to provide an apparatus for its ejection from the body, they would not, I think, have been supporters of this hypothesis—but would have sought for another; one, which did not depend upon the principle, that the urine must form a portion of the circulating fluids. But even if we grant the truth of *this* hypothesis also, still it will not, any more than that of Mr Darwin, explain all the cases of wandering urine. It will only account for those which happen after the urine has been secreted by the kidneys; and cannot possibly account for those which take place when the kidneys are wanting, or when they have been destroyed by disease. There are many cases upon record, where the urine apparently has not been secreted for weeks and months, and even where it has never been secreted. Dr Parr has recorded a case that came under his own observation, in which 'no urine was apparently secreted for six weeks;' and Haller relates a similar case that lasted 'twenty-two weeks.'

In the Philosophical Transactions, we meet with various instances of a similar nature. Among the most remarkable of which is the case of a youth of seventeen years of age, described by Dr Richardson, 'who had never made water from his birth, nor had felt the least uneasiness on this account, being healthy, vigorous, and active.' Many more like cases might be referred to.

All these instances of suppressed secretion and non-appearance of urine, must be owing either to the destruction of the kidneys by disease or to a natural destitution of them. Numerous cases are to be found in works of morbid anatomy, where the kidneys were totally destroyed by disease; and not a few are mentioned in which they never existed.

Now I contend, that in all these cases of destitution of urine, to which ever of these causes it is owing, there must be some foreign outlet for its discharge from the body. For its constituent principles, as has been sufficiently proved, cannot be retained in the blood without danger. 'The outlet,' says Dr Good, 'at which these are separated is not always manifest; and hence they sometimes appear not to be separated and discharged at all; though, if the state of the patient be critically examined into by an accurate pathologist, the vicarious channel will generally be detected.' 'The two most common emunctories that supply the place of the kidneys are the skin and the bowels. In Dr Parr's case, he states that there was no vicarious evacuation, except a profuse sweat for a day or two; and he adds, that there was no suspicion of imposture, as the patient was in a hospital and constantly watched. But we have no account of the state of the bowels. In Dr Richardson's case of a natural destitution of urine, the patient is admitted to have laboured under an habitual diarrhœa, though with little uneasiness, and the discharge of the urinary elements is very correctly ascribed to the intestinal flux.' In the numerous instances of the destruction of the kidneys by disease which have been recorded, there was either a profuse sweat or frequent nausea and vomiting, or a continued diarrhœa. And in a few instances of the destruction of the kidneys, there has still been an accumulation of urine in the bladder. Urine has also been found to flow into the bladder when the ureters have been rendered impervious by disease, and when ligatures were tied around these organs, as were done in those experiments which were instituted for the purpose of determining whether there was any direct passage between the stomach and bladder. Now in all these instances the bladder and urethra, instead of being the natural, became foreign outlets for the urine—as much so indeed as the ear—the breast, &c.—and they, at the same time, prove that the foundation upon which this hypothesis is built is of sand, and cannot stand.

Since then we meet with so many objections to the truth of this, and to the first named hypothesis; and since neither of them, even if they were true, will explain all the cases of wandering urine which may take place, let us reject them and seek for another which is not liable to so many objections, and which will, if true, account for every phenomena of paruria erratica which has occurred, or can occur. Such an hypothesis is the third and last one that I proposed—which is, that the urine is formed by the extreme vessels which naturally convey blood. The whole and each individual part of the body is traversed by these vessels. They form, in fact, almost the whole of its structure. Every gland of the system is little else than a bundle of minute capillaries—and even these are the products of other capillaries. The growth and formation, and every individual function of the whole body is, therefore, the result of the action of these vessels. Whatever then is accomplished in our bodies during our whole existence, must be through the entire agency of the capillary system. And when we speak of the juices, or any production whatever of the human system, we must recollect that the extreme vessels form them. Now it is upon the principle that these vessels may vary their action so as to elaborate a material different from that which it is their common office to elaborate, that this last hypothesis is founded—and who does not know that they may thus vary their action? We may witness it almost daily. We see this in every disease of the body. We frequently see it in its perfectly healthy state. The vessels of every organ and of every part of the body are capable of such a change. Who does not know that the secretions of every kind are oftentimes changed materially from their natural state? and are very much altered, both in their properties and quantities, by any violent commotion of the system generally. In all diseases affecting the alimentary canal, this change of action is manifested. The saliva which issues from the different glands of the mouth becomes greatly altered in consequence of a diseased action of these organs. 'Under the influence of the irritating passions, and especially of violent rage, it assumes a frothy appearance, and in many animals becomes poisonous. It is said, indeed, to become so sometimes in man himself.' The juices of the stomach frequently become acrid and diseased by violent agitations of the mind. In all dysenteries and diarrhœas, the vessels of the intestines must vary their action exceedingly in order to secrete the various fluids which are the results of these diseases. The bile, which it is the office of the liver to secrete, is frequently changed in its properties. It is sometimes 'black, green, albuminous or watery, insipid, acrid, or even acid and effervescing.' If we observe the fluid which the kidneys secrete, we shall find many varieties. If we examine the fluid which flows from the mucous membrane of the urethra, and of that which is secreted by the inguinal glands during the different stages of the venereal disease, we must be convinced that the extreme vessels must take on an action in these cases, as different from their common one, as they would do if they secreted perfect urine. Think too of the diverse fluids and other substances which the uterus is capable of secreting from the appearance to the disappearance of the menses, and from the time of conception to the termination of pregnancy. Does not this organ, during these periods, alter as much in its mode of action to secrete the various fluids which it does secrete, as it would if it should secrete urine? It is clear, I think, that it must. But this change of action is not the peculiar property of the extreme vessels of the glandular system; it is enjoyed in an equal degree by all the extreme vessels of the body, as is proved by the different fluids and substances which are frequently formed in and upon it. In every case of inflammation, there are as many changes of action of the extreme arteries, as there are processes in that inflammation; and the changes which take place in these vessels in order to perform these different processes, must, in many instances, be as great as they would be if the same vessels secreted urine. The pus varies materially from the blood; and the matter, which frequently flows from sores, and ulcerated surfaces, differs as widely from the blood, as the strongest urine does.

Such then being the powers of the extreme vessels of our bodies we find no difficulty in explaining the phenomena of erratic urine. The vessels of the parts at which this fluid is discharged from the body, form it. That which is discharged from the alimentary canal is formed by the various secreting vessels of that organ. That which is discharged at the nipple is secreted by the mammæ, and that which flows from the ear may be formed by the glands which surround it, as the parotid, the maxillary, &c. while that which is discharged from the umbilicus and other parts where there are no glands, must be elaborated by the common blood vessels which go to those parts. And in assigning to the vessels of these various glands and parts of the body, such a function, we do not, as we have already proved, clothe them with a power superior to that which they possess in other cases. But we are not indebted to analogy alone for proof that the extreme vessels, other than those of the kidney, may secrete urine. We have direct evidence of this fact. In treatises on diseases of the urinary organs, we read of many cases, where one or both of the kidneys have been entirely destroyed by disease, and a large sac or cyst occupying their place, and performing their natural function of secreting urine. Cases of this kind are to be found related in the works of Morgagni, Dr Baillie, and in the various medical journals. The Medico-Chirurgical Journal for 1816 contains a remarkable case of this kind. Dissections have shown, likewise, that the kidneys have been, sometimes, originally wanting, and their situation supplied, and function performed by an organ or organs bearing no resemblance to them either in their structure or form. An instance of this kind came under my own observation in the autumn of 1822. Being at that time in the country, and at a place where some men were slaughtering a swine, I had the curiosity to wait and see the animal opened; and on examining its viscera I found, to my astonishment, the kidney of the right side wanting, and an organ of a cylindrical shape, resembling a portion of the colon in its appearance, possessing its place. This singular organ was about six inches in length, and two in diameter. It was placed close to the spine, and extended from the lower rib downwards. It was rather smaller at the lower extremity than at any other part. It was composed of a strong, thick, dense membrane, consisting, as it were, of but one single layer. Its inner surface was smooth and shining, and appeared more like an exhaling, than a secreting surface. At the very lowest extremity of this organ, the ureter originated and extended to the bladder as in common formations. It was partly filled with the urine which had been elaborated by this membranous organ, and was conveying it to the bladder. In these two classes of cases, we have other examples of unnatural evacuations of urine; as unnatural, in fact, as those which take place at the ear and breast. And they prove to a perfect demonstration, the truth of this hypothesis. For, in the first place, we see that the existence of the kidneys is not absolutely necessary for the formation of urine; and in the second place, we have complete proof that the extreme vessels may vary their action so as to secrete this fluid. In the cases where the kidneys were destroyed by disease, and their places supplied by a different secreting organ, there must have been a variety of changes in the extreme vessels before they could have been able to form urine. For they must, in the first place, have performed all the different processes of inflammation in order to have destroyed the kidney; and, secondly, they must have gone to work, and constructed the membranous organ (unless, indeed, it was the mere mechanical distention of the capsule of the destroyed kidney itself;) and then having, as it were, created and made themselves a constituent part of this organ, they must have performed the task of creating urine. There is then no question but that the extreme vessels do possess such a power as we have supposed. Nor is this power confined to animals alone. It is a property common to all organized beings; to vegetable as well as to animal. There is hardly a tree or a vegetable upon the face of the globe, which does not, during some part of its existence, have its juices very much altered in these qualities. When a plant or flower is injured by any cause, as by the sting of an insect, its fluid becomes changed in a great degree, both in its physical and chemical properties. In the production of all those tumours and excrescences, which are frequently to be observed on trees and vegetables, there must have been a change of action in the vessels of the tree or vegetable on which they exist. Such a power was necessary for the preservation both of vegetables and animals. The feebleness of our structure, and our relations to external things rendered it so. It is indeed the great preserving agent of our lives—the vis conservatrix et medicatrix naturæ. In adopting, therefore, the hypothesis, that the extreme vessels form the urine in the disease of 'paruria erratica,' we premise no new or unheard of principle. We endow the human body with no power which daily observation does not prove it to possess, and which does not exist in all organized living beings. We are not obliged, as the supporters of the two other hypotheses are, to compel the system to assume a function which requires a destruction of an important and necessary portion of the vascular apparatus, nor the introduction of a substance into the body which must necessarily produce death. The explanation which I have now offered for the existence of erratic urine, has, I find, been embraced by many others. 'In the cases of ischuria, where the urine has been found in other cavities than those of its proper organs, some professional men of eminence have given it as their opinion that the vicarious organ has secreted the fluid. Dr Senter has so expressed himself in his account of a very singular case. Dr Cheyne more than hints at it. Dr Home delivers it as his opinion; and Morgagni is of the same doctrine. To this explanation I meet with but one objection of any importance; and it is that which is derived from the experiments, which have been lately performed upon the blood of the patient at Providence. It is found that the blood which is drawn from the arm, if poured upon a heated shovel, gives out the peculiar odour of urine—a circumstance which would go to prove that the urine is contained in the circulation mixed with the blood. But might not the blood be impregnated with the peculiar odour of urine, and still be free from that fluid? The odour of urine is a very volatile and an highly attenuated principle, and is absorbed readily by the atmosphere and by water. In the case, then, that the urine is formed by the mammæ, for instance, or by any other vicarious gland or part of the body, might not this urinous odour be absorbed by the blood as it circulates through these parts, and be strongly impregnated with it, without the urine itself being in the circulating mass? I think it might. The above stated fact has, I must confess, made me less confident in the opinion which I have advanced. One well attested fact proves more than a thousand hypothesis. The case which now exists at Providence offers an opportunity for the institution of experiments, which might go far in determining this interesting question. And it is to be hoped that the physician, under whose care the patient now is, will take advantage of the opportunity, and publish the results of his experiments and the history of the case. The profession claim it of him.

Account of the Epidemic Dysentery, as it appeared in Beverly in the Summer and Autumn of 1824. By Dr Abner Howe.

[Communicated for the New-England Journal of Medicine, &c.]

THE epidemic, which prevailed in this place, during the months of August September and October, appeared first in Water-Street, and in that part of the town contiguous to the wharves. Cases occurred in different neighbourhoods nearly at the same time; and in three weeks after its appearance, individuals in almost every family in the above mentioned section of the town were under its influence. Four fifths of the entire population, which was contiguous to the bridge and wharves, were more or less diseased during the season. A large proportion of the inhabitants however were not seriously interrupted in their usual employments.

In about a fortnight after its appearance as just described, a number of cases occurred near the meeting-house in Upper Beverly; and here it proved more fatal in proportion to the number diseased, than in any part of the town. For a number of days, while the epidemic was raging with symptoms as malignant as at any period of its continuance in these two sections, the intervening space, a distance of two miles, was without a case. However during the months of September and October no part of the town was entirely exempted from its influence.

Less rain had fallen during the preceding months of June and July than usual, and the springs were low until October, but no local causes were known to give a more general prevalence or greater malignity in one neighbourhood than in another. Some change in symptoms appeared after repeated rains, but the disease was not rendered milder by such a circumstance.

Symptoms. The symptoms were a pain in the bowels with frequent discharges of a dark green colour, with occasional specks of blood. The pain, which attended the discharges, with a few exceptions, was less severe than usually attends the dysentery. The disease was generally ushered in with rigors and pains in the head, back and limbs. The pulse was somewhat frequent small and hard. The tongue was commonly covered with a white or greenish coat. During the progress of recovery there was a remarkable uniformity in the appearance of the tongue. The sides and end first became moist and of a lighter colour than before and a separation of the coat from the tongue then followed in a pretty uniform and gradual manner. If after this separation, the tongue was left smooth and red, a protracted disease was to be expected. If a thin white coat succeeded the first, the disease generally continued another week without much abatement.

For a few days after the invasion the skin was hot and dry; and a pain in the head and dizziness were pretty universal symptoms. In a few cases, which generally proved fatal, coma appeared soon after the attack. The colour of the alvine discharges varied with a great variety of shades, from a dark green to a light yellow. And the violence or fatal tendency of the symptoms was pretty accurately marked by the colour of the dejections.

A suppression of urine was a common symptom, and considerable pain was often produced by its retention. It was not uncommon both for adults and children to void their urine but once in twenty-four hours. A woman was confident her little son discharged no water for four days. The urine was generally of a higher colour, than natural, and a milky sediment appeared in the vessel when suffered to stand. Yet the retention could not be accounted for from inflammation and increased action of the absorbents of the bladder, but in some instances at least, there must have been a diminished secretion. Tenesmus was a common though not a universal symptom.

About the last of August, cases of cholera frequently occurred. But this could not be considered a distinct disease from the dysentery, which had prevailed for three or four weeks. The symptoms, which characterize the two diseases, were witnessed in the same family; and individuals were known to be successively attacked with both.

The epidemic during its continuance put on the appearance of diseases, which are not only different in symptoms and names, but are supposed to arise from different causes. For three weeks after its commencement, it assumed the pathognomonic marks of dysentery. For four weeks from this period the alvine discharges were more bilious, and cases of cholera were frequently witnessed; and during the month of

October, the disease pretty generally, especially for the first six or eight days, exhibited the appearance of a continued bilious fever.

Treatment. In a few of the cases to which I was called, I prescribed emetics of Ipecac. or Antim. Tart. followed by cathartics, and to be succeeded by opium in such quantities as to relieve the pain. Emetics of all kinds, when they produced no other effect than the evacuation of the contents of the stomach, appeared to be attended with little benefit to the patient. Even in the early stages of the disease, the symptoms were not perceptibly relieved by medicines of this class.

Cathartics were very generally followed with decided benefit. Even aloetic pills, which were sometimes taken before the advice of a physician was requested, commonly afforded some relief. Rhubarb in substance or tincture was a useful remedy. In a few cases however it excited great tormina and distress. Castor oil, when given alone or combined with calomel, was generally followed with some relief from pain and abatement of disease. But during the second and third periods of the epidemic, calomel alone or combined with rhubarb or castor oil, was decidedly a good carthartic. It was my general practice to give almost daily such doses of this medicine as to produce two or three dejections, and to give opium either combined with it or to follow its operation in such doses as to remove all pain. Alkalis formed a useful class of remedies. I frequently gave magnesia, lime water, or a solution of the carbonate of soda. Injections of starch or mucilage of gum-arabic with tincture of opium were generally followed with temporary relief, and frequently with permanent benefit. Blisters applied to the bowels or even to the limbs were not without some beneficial effects.

Bleeding was not followed with such decided relief as to induce me to have very frequent recourse to the practice. In one case attended with pain in the head, vomiting and purging, a pulse small, frequent and somewhat hard, the blood drawn from the arm did not exhibit the appearance of inflammation, and no perceptible benefit followed its abstraction. In another case attended with similar symptoms, but with less of the cholera, the blood exhibited something of the inflammatory buff.

Some benefit generally followed the use of sudorifics, especially in the first stage of the disease. Ipecac. and opium or the aqua acet. ammon. in full doses were generally used. The warm bath and the above mentioned compounds were among the most efficient remedies for the epidemic.

The vegetable and saline astringents were exhibited in different stages of the disease, but usually with no good effect. When it had assumed its chronic form and had been of many weeks continuance, astringents, taken into the stomach or used by way of injections, did not give satisfactory relief. When it passed from its acute to its chronic form, it appeared to be only a change from a general to a local disease. Purgatives were necessary in the first, and laxatives and tonic cathartics in the second. A man, who had laboured under the disease for six weeks, with frequent discharges from the bowels, and considerable pain, which was mostly confined to a particular spot, was cured by the application of a blister on the painful part. Having used the spirits of turpentine with success in some cases of diarrhœa, I expected it would prove a valuable remedy in the chronic form of dysentery. But after giving it a fair trial in many cases, I was induced to abandon its use, having witnessed no decidedly good effects from the medicine in any case.

CASES.

August 5.—Visited Mr E. W. aged 60. His pulse is about 90. Has severe pain in the bowels and discharges of a green colour, sometimes streaked with a little blood. He has frequent but slight rigors. Has no appetite for food, and is at times considerably thirsty. His tongue is covered with a white coat. Give 6 grs hydrar. submur. to be followed with purgative salts in four hours. After the purgative operation, a grain of opium to be given after every discharge, or when the pain should in any degree be troublesome. He is likewise directed to take half an ounce of aqua acetitis ammon. every 8 hours.

6. Symptoms nearly as yesterday. The aq. acet. am. and opium continued.

7. Prescribe 6 grs. hyd. sub. to be followed with an ounce of castor oil. The aq. acet. am. continued.

The opium to be given in such doses and with such frequency as to remove all pain.

8. An ounce of tinct. rhei to be given. Other medicines as before. He drinks freely of an aqueous solution of gum arabic. His diet to be water gruel and milk porridge.

9. Discharges from the bowels are frequent, and their colour indicates an increased secretion of bile. Give 6 grs. of hyd. sub. Directed to take 20 grs. of carbon. soda every six hours, and at night has pul. opii gr. 1. Pul. Ipecac. gr. ij.

10. The pain higher in the bowels than before, but not severe. Carbon. soda and pul. opii and ipecac. continued.

11. Some abatement of disease. The alkali and opium continued. The pain being principally confined to one spot, a blister is applied to the part.

12. The fur is separating from the edges and end of the tongue. The alvine discharges less frequent and the colour of a lighter green. Medicines continued.

13. Give an ounce of castor oil. Opium and alkali continued.

14. Give a decoction of the slippery elm (ulmus fulva.) The opium to be given when indicated by pain.

15. Notwithstanding the disease slowly subsided, and the fur separated from the tongue during the second week, yet the dysenteric discharges were not entirely removed until the expiration of four weeks from the attack. A small spot a little below the umbilicus, during the whole time, remained painful and tender when pressed. This local disease of the alimentary canal was finally removed by mild cathartics and the local application of blisters.

August 10.—I was called to visit a child aged 6 years. The discharges from the bowels were frequent, of a chocolate colour and attended with considerable pain. There was great prostration of strength, pain in the head and restlessness. Give an emetic of pul. ipecac; and its operation to be followed with 6 grs. of hyd. sub. The tinct. opii to be given in such doses as to remove all pain. A quantity of the solut. carbon. soda to be given every six hours.

11. Symptoms no better than yesterday. The cathartic to be repeated, and to be followed by the opium and alkali. Directed that the bowels should be bathed with warm water, and that the child should drink freely of the decoction of slippery elm.

12. Symptoms as before. Medicines continued. An injection of muc. Gum arabic with 20 drops of tinct. opii to be given.

13. The child at times is comatose. Discharges are frequent, and often specked with blood. 3 grs. hyd. sub. and half an ounce of castor oil to be given. It is directed to take a drachm of mist. calcis. carbon. every six hours.

14. No abatement of disease. Directed that a large blister be immediately applied to the bowels. Medicines continued.

15. Discharges are frequent, dark and small in quantity. The child is disposed to sleep except when roused by pain. The urine is seldom discharged and the quantity small.

Give half an ounce of castor oil, and directed that its operation be immediately followed by tinct. opii. Give mucil. g. arabic and aether nit. every three or four hours. The limbs and bowels to be often bathed in warm brandy. Injections repeated.

16. Coma almost constant. Brandy and tinct. opii to be given in small quantities. On the morning of the 17th the child expired.

September 8. Visited Miss M. V. aged 18. She had been attacked the evening before with the symptoms of cholera. The vomiting and purging had been almost without intermission for a few hours, attended with great prostration of strength. A great part of what was thrown from the stomach indicated the presence of bile. Direct that she take 2 grs. of hyd. sub. combined with a syrup of white sugar and brandy every half hour, until a cathartical effect should be produced, and then a grain of opium to be given every 8 hours. A blister is to be applied to the stomach and frictions to the limbs.

9. Much of the medicine had not been retained. The surface was warmer than yesterday. pulse 130. Give hyd. sub. 3 grs. and opii gr. j. every 4 hours. Frictions and warm bath directed.

10. Vomiting not quite so often as before, but the stomach rejects all food and drinks. The alvine discharges take place every half hour. Colour of the dejections a dark green. She is so weak as to be unable to articulate distinctly and is at times delirious. Continue the hyd. sub. and opium, and give the effervescing mixture.

11. No improvement since the last visit. Delirium continues. Pulse 135. Medicines continued. An enema composed of muc. g. arab. and 30 drops of tinct. opii to be used.

13. At times a febrile flush appears in the face. The vomiting and alvine discharges are less frequent. The pulse is 120. Medicines as yesterday to be continued.

14. The gums are a little swollen, and all the symptoms, are more favourable. Give 10 drops of an aqueous solut. of hyd. muriat. and ten drops of tinct opii every 8 hours.

15. The vomiting has almost ceased, and the alvine discharges are about six in 24 hours. The solut. and opium to be continued.

16. She takes food with a relish. Give an infusion of rad. columb. in small and frequent doses. Tinct. opii to be given when indicated by pain.

October 8.—Visited Mr C. P. aged 35. He has great pain in the head, back and limbs. The discharges from the bowels are green and attended with some pain. Pulse 100, small and hard. Drew 16 ounces of blood from the arm. A blister is to be applied to the back of the neck. Give 10 grs. of hyd. sub. and 20 grs. of pul. rhei. A similar dose to be repeated in 8 hours if no carthartical effect should follow the first. The operation to be followed by 2 grs. of pul. opii and ipecac. sufficiently often to remove pain.

9. The opiate powders to be continued, and he is directed to drink freely of a solution of carbon. sodæ.

10. He vomits frequently and the alvine discharges are attended with considerable pain; 2 grs. of hyd. sub. mur. to be given every 2 hours, and a large blister to be applied to the abdomen.

11. The vomiting continues, and the discharges from the bowels are small in quantity. 3 grs. of hyd. submur. to be given every two hours, and an ounce of magnes. sulph. every four.

12. The medicines have been given, but no cathartic effect produced. The hyd. sub. to be continued, and an enema to be used every four hours until the bowels become sufficiently moved.

13. The alvine discharges have been copious. Give one ounce of aq. acet. ammon. every six hours and one gr. of opium when indicated by pain.

14. Symptoms and remedies as yesterday.

15. Some abatement of the general disease. Alvine discharges frequent and nausea occasional. Give an ounce of tinct. rhei. Its operation to be followed by frequent doses of the mist. cal. carbon.

16. The mixture to be continued.

17. The tongue is becoming clean, and the appetite for food improving. Give of a decoction of the angustura a number of times in a day.

October 20. Saw Miss C. O. aged 14. She has nausea, frequent rigors and great pain in the head. Give 6 grs. of hyd. subm. and an ounce of castor oil. Sinapisms to be applied to the feet and a warm decoction of pennyroyal to be given until sweating is produced.

21. Symptoms somewhat abated except the pain in the head. A blister is to be applied to the back of the neck; and a small dose of solut. ant. tart. to be given every six hours.

22. A cathartic of hyd. submur. and castor oil to be given. Solut. ant. to be continued.

23. The pain in the head is so severe as occasionally to produce delirium. Give opii gr. j. ipecac. gr. ij. hyd. submur. gr. iij. every six hours.

24. Since yesterday there has been a sudden change of disease from the head to the lungs. She has no pain in the head, but is affected with a constant cough with dyspnoea and no expectoration. The bowels are constipated. Give an ounce of castor oil, and the following compound every six hours, hyd. submur. gr. iij. antim tart. gr. $\frac{1}{4}$ potass and nit. gr. iij.

25. The discharges from the bowels begin to assume a dysenteric appearance. The antimonial powders are to be continued.

26. The cough and dyspnoea are abating. The pul. antim. to be continued. A grain of opium to be given when indicated by pain.

27. The cough and dyspnoea removed. The dejections frequent and attended with pain. The medicines to be continued.

28. The disease of the bowels is perceptibly abating. The mouth is a little sore.

29. Direct her to take daily of an infusion of columbo.

Beverly, May, 1825.

Case of Ovarian Pregnancy. Communicated by G. Barkhausen, Med. Dr. of Bremen.

[Communicated for the New England Journal of Medicine and Surgery.]

MRS. M. . . . . . 34 years of age, of a delicate frame and inclining to hysteria, had, in her youth, the small-pox, which left her face much pitted, and she happily surmounted all other complaints, which commonly occur in that age; she had in due time, and afterwards regularly, her menses, and enjoyed generally, up to the age of 24, when she was married, a good state of health. Her marriage was a happy one; she became the mother of four living children, and suffered four times an abortion in the fifth month. During and in absence of her pregnancies, she now suffered frequently from spasmodic affections of the abdomen, and rheumatic pains in the head; however, during her pregnancies she was free from vomiting and many other sufferings not uncommon to said state. In December 1822, she suffered from a slight pleuritis, which, by means of topical bleedings, neutral salts, &c. was removed.

From the beginning of April 1823, the lady rated her ninth pregnancy; the menses did not appear, and she now likewise suffered, as commonly was the case during her pregnancies, more from rheumatic and spasmodic pains, than in absence of the same. However, the first five months of this pregnancy were in nothing distinguished from former pregnancies. In the beginning of August next, she perceived the first movements of the child. I no longer recollect in which part of her belly; but I know that, in regard to this, she perceived no difference from her former pregnancies. Soon after to her presumptive and already increased spasmodic complaints of the abdomen, a cold was added, with pains in the thighs and fever, on which account she at first kept her bed in the hope of obtaining relief from perspiration. This, however, not being the case, I was applied to on the 13th of August, 1823. She now complained of pains resembling colic, which at first occupied the region of the stomach, and afterwards that of the uterus, and which, by external pressure, were increased. The uterus appeared to have the degree of expansion, answering to this period of her pregnancy. The pulse was accelerated, and beat about 120 times a minute; the tongue was yellowishly covered and humid, the skin moist, the urine very unnatural, the body at first costive, and afterwards much inclining to diarrhœa.

It would lead me too far, were I to give the complete journal of the now begun sufferings of the patient, and I therefore permit myself only to observe, that the symptoms mentioned soon increased to a threatening degree, and seemed to render it even more certain, that the gravid uterus was attacked by an inflammatory affection, probably of a rheumatic nature, since the symptoms of fever, and principally the pains in the region of the uterus were incessantly on the increase, and resisted all internal and external remedies. Once it also appeared, as if it would come to an abortion; but upon an internal examination, the collum and os uteri shewed no sign of an approximation of the same. Only towards the end of the month, and still more in the following (September) the sufferings of the patient were a little less.

She remained, however, continually feverish; the abdomen in the region of the uterus painful and particularly sensible to the touch; the belly gradually distended, as in all common pregnancies, and the patient felt continually the motion of the child.

Alternately coughing, diarrhœa, and spasmodic affections of the stomach and abdomen appeared, which on the whole were little relieved by medicine. The patient grew considerably leaner; she could take but little nourishing food, and was unable to quit the bed. In consequence of the extraordinary atony and laxness of all parts, the patient in the first days of October, whilst raising herself in bed, had a prolapsus uteri, which, however, without medical assistance, retreated immediately. According to her own description, the part projected had been of the size of a child's head. The same accident returned twice towards the end of November, but was, however, each time, by the patient herself, remedied.

Her present state was now in general, at least in comparison to her prior sufferings, a supportable one; still the continued febrile action, the violent pains of the abdomen, which now principally directed themselves to the left hypochondrium, the dry cough, the increasing emaciation and weakness remained. The patient now imagined, that she observed the motions of the whole child's body, and not merely those of single members, which gave her great uneasiness.

In the beginning of January 1824, when the patient, according to her calculations, expected her delivery and the end of her sufferings, no changes appeared which warranted the hope of this favourable issue. It was not until the night of the 21st of January, that pains indicative of her being in labour appeared, but were however without any influence on the not entirely vanished collum, nor on the hardly opened os uteri. The child's parts upon an internal examination were not distinctly felt, as little as upon an external examination, which the swelling of the abdomen nearly prevented. In the mean time it became ever more apparent, that the patient would not be delivered in the usual way. The inflammatory affections of the abdomen recurred once more with such violence, as to render a strong antiphlogistic plan of treatment necessary. The pains resembling those of labour returned now almost daily; however, the internal examination shewed not the least change.

On the 26th January, the patient felt the last motions of the child; her emaciation reached now the highest degree; a tormenting cough, aphthæ of the mouth, and probably of the whole tractus intestinalis; incessant pains, resembling those of labour and of colic in the tympanitic, swelled, and to the touch highly sensible abdomen, forced incessant complaints, and loud wailings from the poor sufferer.

She now complained, principally, of the left hypocondrium; she could better bear to sit upright in bed, than to lie down, and from time to time the dysentery reappeared.

On the 5th February, the labouring pains arrived at the highest degree, and brought the patient nearly to despondency. Remedies were of no avail. The internal examination shewed now, likewise, no change; and it became but too certain, that the patient could not be delivered; wherefore it was resolved upon in a medical consultation held, to make the Cesarian section as soon as the patient should have expired, in order to save the child, if it should happen to be still alive. That, owing to the uncertainty of the diagnostic alone during the lifetime of the patient of this operation never could be the question, is sufficiently evident. Soon after, to the other sufferings of the patient, was added an almost incessant vomiting of a greenish bilious matter, which, by opium, was only alleviated, but not cured.

On the morning of the 10th of February, the patient informed me with a delighted countenance, that many hours ago the vomiting and pains of the abdomen had ceased, and that she felt uncommonly easy. The pulse had got considerably weaker; I suspected that gangrene of some one of the organs of the abdomen had taken place, and flattered myself that the poor sufferer would at least expire free from pain. But this did not prove to be the case. Already, at noon, the most violent pains of the abdomen, incessant vomiting, coughing, and all of other former torments reappeared. She was too weak for loudly lamenting, and only soft whining was heard, till at last, on the 12th of February, in the evening, an easy death put an end to her inexpressible sufferings.

Immediately after, having convinced ourselves of the actual death of the patient, Mr Surgeon W. and myself, proceeded to the operation. The corpse was in the highest degree emaciated, and still felt all over warm. The abdomen, which, during the last months, had continually been tympanitically swelled, had now entirely sunk, and was divided in two halfs by a fold, which ran from one hypochondrium to the other, across the navel. In the lower one was the fruit, and the upper one appeared to contain the bowels. Through the extremely thin coverings of the abdomen, we now felt the child's parts so distinctly, that we no longer suppressed the idea already conceived during the last period of the patient's life, viz. that of an extra-uterine pregnancy. But we proceeded to the matter in hand. The coverings of the abdomen did not exceed a line and a half in thickness. Being opened in the linea alba from the navel to the symphysis ossium pubis, a good deal of bloody matter came out. At the same time an oval body presented itself to us, loose in front, however grown together with the peritoneum in the fundus, on both sides and below in the cavitas pelvis, which had the appearance and the thickness of a large air filled ox bladder, and which must contain the fœtus. But what was this receptacle? Was it an abnormous one? Was it merely the thickened membranes of the ovum externally of the uterus, or was it the uterus partaking of the general state of emaciation, thinned to this degree, and in consequence of the preceding process of inflammation with its surrounding parts here and there grown together? These questions we were compelled to leave for the moment undecided, in order to get as quick as possible at the child. We therefore opened this problematic receptacle by a longitudinal incision sufficiently to take the child out. It was lying across, with the head in the right, with the feet in the left side, and with the face turned to the mother's back. The hands were lying on the breast of the child. It was unusually large, well nourished, in all parts completely formed, of the female sex, and evidently long ago already dead, since putrefaction was not to be mistaken from the bad smell of the corpse, from the muddy liquor amnii, and from the cutis which every where severed itself from the body. The funiculus umbilicalis was of the usual length, but very thick; the placenta adhered to the fundus of the receptacle, but to the basis towards the right side. We left the placenta as it was, cut the funiculus umbilicalis and cleansed the belly and receptacle cavity from the putrid matter which it contained, in order to examine all parts in their positions with leisure. To this end and next in order to ascertain, whether the receptacle which we had before us, was really the uterus or an abnormous one, we tried to enter with the forefinger through the vagina into the but little opened os uteri externum, in which we succeeded, the os uteri internum, however, did not allow the finger to pass. In order to determine, whether, perhaps, the placenta had grown on the inner os uterinum and by inflammatory action adhered to it was the cause of this impediment, we separated in the first instance the former with our fingers from the place, where it adhered in the pelvis minor, which was effected pretty easily, taking for our guide the only existing membrane of the ovum, probably the chorion. The placenta consisted of two entirely divided oblong pieces, very nearly of the same size, from each of which bloodvessels rose, and which, both taken together, formed about the size of a common placenta. Not even now could we succeed in carrying the finger from the vagina through the os uteri internum, and to effect this we were obliged to use some force. The finger now entered into a small hole scarcely large enough to receive it, and closed on all sides, the proper cavum uterinum, and we perfectly now convinced ourselves, that the child had been enclosed in an unusual receptacle. In order to ascertain its nature still more minutely, we separated its adhesions with the peritoneum in the fundus, on both sides and in the cavum pelvis, principally from the fundus vesicæ urinariæ and from the proper uterus, which proved that the right ovarium had formed this pseudo-uterus. It was on the spot, which, immediately after the belly incision, we got sight of, and where we had opened it, thinnest; every where else, however, it was much thicker, and principally towards the basis it appeared clearly to contain muscular fibres. It had placed itself from the right side towards the middle of the belly on the fundus uteri. In the left hypochondrium, a large quantity of fluid had collected in a cavity between it and the peritoneum, which had the look and smell of liquor amnii. A similar, but more putrid and extremely offensively smelling fluid had collected in sundry cavities communicating with each other between the pseudo-uterus and the peritoneum in the cavum pelvis. The right tuba fallopii, and all the ligaments of the uterus of that side, had, with the extended ovarium, grown together and partly formed the basis of the receptacle, partly the pedicle, by which it was affixed to the uterus. On the left side all parts were in their usual state. The real uterus was not much larger than the egg of a duck; its substance of a whitish colour and about from four to five lines in thickness, its cavity corresponding to its circumference, but not internally covered with the membrana decidua.

Respecting the other contents of the cavum abdominis, we observed nothing deviating from the common state. The bowels, as in a case of common pregnancy, were lying above the receptacle.

Note.—Dr Barkhausen informs us, in a letter which accompanied the above interesting case, that his paper was translated from the German, by a friend not of the medical profession. As we did not receive the original with it, we have thought it better to print it from the manuscript, with only a very few and unimportant alterations.—Ed.

Case of Puerperal Convulsions, occasioned by undigested food.

By Dr Enoch Peirce.

[Communicated for the New England Journal of Medicine and Surgery.]

IN the morning of August 11th was called in haste to Mrs B., who had, apparently, been in perfect health until that morning.

Whilst getting breakfast for the family, she had been taken in convulsions. The first paroxysm was not preceded by any indisposition. When I first saw her she had had two fits, but was then free from spasms. Her mind was regular, and she was able to converse; complained of a severe pain of the head and a sensation as though there was a load at the stomach.

She was thirsty, face flushed, pulse from 90 to a 100, full and strong. She had just commenced her ninth month of pregnancy.

Before I had time to do any thing for her, she had a return of convulsions, which appeared the most distressing and alarming of any I had ever seen. Every muscle in its turn appeared to be contracted to the utmost. The tongue was thrust out of the mouth and mangled by the teeth; her face was literally purple, and, at every expiration, blood mixed with saliva was thrown from the mouth and nose.

I immediately took from her arm two pounds of blood. Upon further inquiry learnt that she had from infancy, enjoyed perfect health, and had been a hard-labouring woman; likewise learnt that, for a few days previous, had indulged in eating green apples that were not fully grown. I was told she had eaten two dozen of them the day before, under the belief that she longed for apples, and, therefore, they would not hurt her.

From the circumstance of her eating so many green apples, together with the distress at the stomach, I was induced to give an emetic, thinking the stomach might possibly be the place of irritation, not being able to satisfy myself but that the uterus was quiet.

I followed the emetic with a cathartic. The evacuations, both by emetic and cathartic, were copious, consisting of undigested pieces of apples, bile, &c. in large quantities.

During the operation of the emetic and cathartic, she had frequent paroxysms of convulsions. Intermission between fits was from fifteen minutes to an hour. Duration of each paroxysm was from ten to fifteen minutes.

After the first four or five fits, she became insensible to every thing that passed. During the intervals between fits she slept, or was in a state of stupor. Respiration stertorous, with every appearance of effusion of the brain. Her pulse still kept up, notwithstanding she had lost blood from the orifice of the arm during the spasm, independent of the two pounds taken before stated.

After I found that the very active means employed were useless, a consulting physician was called. I had made frequent examination per vaginam, found the os tincæ closed, and no appearance of labour.

It was then agreed in consultation, that further venesection and laudanum, tinct. castor, and valerian should be used; together with cold applications to the head. Two pounds more of blood were taken from the arm, which softened the pulse, but did not moderate the spasms in the least. Laudanum was given to the extent of sixty drops, every hour for four hours, with castor; and at four in the morning of the 12th, when examining per vaginam as I often did, that I might know if the os uteri remained closed, I found the head of the child protruded from the uterus into the vagina, when I delivered the child and afterwards the placenta. She was free from spasms at the time I delivered her, and labour pains were wholly wanting. The removal of the placenta was not attended or followed with the least discharge of blood. She lay an hour much in the same situation after delivery as at previous intervals between fits, when, at the expiration of an hour, she had, if possible, a more violent convulsion than any which had preceded it.

The mouth of the uterus must have dilated and let the head of the child escape, either during the last or two last fits previous to delivery, as, during the third, previous to delivery, the os uteri was perfectly closed. It appeared to me that the spasms of the abdominal muscles forced open the os tincæ, by propelling the child forward more than by any regular uterine action. She now, that is, five in the morning of the 12th, was perfectly insensible to every attempt to awaken her for sometime, say two or three hours, when her respiration became less stertorous, and she would swallow fluids when put into her mouth after some little exertion to awake her.

On the morning of the 13th, I found her in a quiet state, pulse small, and 90 in a minute, composed, and she was disposed to sleep. Twelve o'clock at noon she became restless, with frequent moanings; her mind disturbed. Her restlessness and moaning soon changed to screeches of six or eight minutes duration, in regular paroxysms, returning every fifteen or twenty minutes. As she was not sufficiently sensible to tell me the seat of pain, I was left to conjecture for myself. I soon became satisfied it was spasms of the uterus, and expected there would be coagula of blood discharged soon.

I patiently waited for that to take place, having understood that she had discharged urine that day. There had not at this time been the least lochial discharge. The pains soon became almost constant and more distressing, pulse quickened and stronger and heat increasing. I gave castor and laudanum. At sunset another physician was called in consultation: an examination was made per vaginam; every thing regular, except the urinary bladder, which was distended with urine; the catheter was used and urine drawn off without any relief to the patient. Flannels, wet with diluted laudanum, had been applied to the abdomen. It was, at ten o'clock, agreed to give forty drops of laudanum every half hour. At twelve at night she began to be more quiet; had short naps, lessened the laudanum to ten drops. At eight in the morning, commenced with five grains of the following mixture every five hours:—Ipecac. and sal. nitre. āā. 10 gr.; opium and calomel, āā 5 gr., which soon relaxed the bowels; notwithstanding it was necessary to give laudanum often, to moderate uterine spasms. The alvine discharges were copious and offensive in the highest degree; in frequency from half an hour to an hour.

It was not uncommon to find pieces of apple-skins with the discharges. The discharges did not reduce her strength, but improved it.

On the 14th there commenced a moderate lochial discharge, without much colour. On the 17th relax began to moderate, with symptoms generally flattering, but still necessary to continue laudanum for reasons above stated; absorbents have been used for two days. 19th. Relax abated to four or five discharges per day. August 21st. Convalescent. I ought to have stated that the milk came regularly. Oct. 15. She was in perfect health.

Lanesborough. Nov. 14th. 1824.

Case in which a Child was retained in the mother a number of months after the usual period of gestation. By Dr THEOPHILUS DOE, in a Letter to a friend of one of the Editors.

[Communicated for the New England Journal of Medicine and Surgery.]

MRS A. H. aged 29, of small stature, thin of flesh, but healthy, a tailoress by trade, became pregnant about the first of April 1822, ten months after being married. She continued well until the last of May, when she was attacked with violent spasms of the stomach, with vomiting. The usual remedies were employed, and in a few hours the spasms were removed. After this she suffered much from soreness in the epigastrium, and much of the abdomen for many days. Four weeks after she had a similar attack of spasm. She was now sooner relieved than before, but the same soreness of the abdomen followed. Through the whole of pregnancy, she was liable to spasm, and suffered much from its attacks. It was, however, less severe as pregnancy advanced. Nausea, vomiting, costiveness, dysuria, were among other diseases she suffered. It was observed that in the treatment for costiveness, the mildest cathartics only could be borne, and even these produced much griping pain.

At the end of the fourth month, the motion of the fœtus was perceived, and the symptoms above named became then less urgent. New ones occurred. Among these was severe pain in the back and hips, and this continued for many months; from the first of November to the middle of January 1823. In other respects her health was not impaired.

About two weeks from the expected time of labour, I was called to her, and found her at 6 P. M. with the usual symptoms of travail. These continued for ten hours, and then subsided. Pain in the back and hips however continued, and from this time she felt no more the motion of the child.

From the 20th January, 1823, to the last of February, she remained in a miserable situation, suffering greatly from soreness in the abdomen, costiveness, loss of appetite, night sweats, great debility, and excessive pain in the back.

March 1st. She was attacked with *phlegmatia alba dolens*, in one limb. The disease having left this, soon after seized the other. During the first and second week of this attack, she had a discharge from the vagina resembling the catamenia. At times this was fœtid. Examination by the vagina discovered the os uteri closed; no portion of the child to be felt. The abdomen was found very tense.

After the twentieth of March, she began gradually to recover. In ten days after, she could walk some distance without fatigue. From the 1st of April convalescence was rapid. The tumefaction of the abdomen began to subside, and she was only incommoded by its bulk. First of May was able to walk two miles; go to church, walk back, and, in short, to manage the affairs of her family. She seemed as large as at the seventh month of pregnancy.

June 10th. Catamenia; health good; further subsidence of abdomen.

Nov. 3d. Nothing remarkable has occurred to this time. The abdomen has gradually diminished to nearly its usual size. A small tumour remains, of size and shape of a child's head. One circumstance has been omitted. Two weeks after the supposed death of the child, the breasts swelled, and milk was discharged from them. This continued till October. The quantity was not great.

From September until March, 1824, she had a copious discharge from the vagina of a thickish, yellow appearance, and not offensive. This discharge occurred in the intervals of the catamenial periods. These last were regular through the whole time.

April 10th, 1824. The discharge has disappeared, and my patient was seized with violent pain in the stomach, bowels and back, and with cough.

16th. Cough has subsided, but pain continues with irritable stomach and difficult respiration.

17th. Vomiting incessant, pain in stomach, &c. very severe.

18th. Vomiting and pain diminished.

19th. Is attacked with severe diarrhœa; great pain; quick pulse.

20th. All symptoms, especially vomiting, greatly aggravated. From this time to the 24th of May, when she died, no other change occurred than a regular increase in their violence, together with the constitutional affections which such symptoms ordinarily produce.

Dissection.—Upon opening the abdomen, the uterus was discovered to be very much thickened, and presented the appearance of having been inflamed, and to have suppurated. It adhered closely to all the surrounding parts and organs. Anteriorly, it was intimately united with the peritoneum, and in this way with the abdominal parieties. An incision was next made through the anterior face of the uterus, and a full grown fœtus discovered. The bones of such portion of the fœtus as presented to the anterior portion of the uterus, and were in contact with it, were denuded. In all other parts the child was entire, even the skin in these remained perfectly fair, and unchanged as in life. Some slight marks of disease were noticed in other parts of the abdomen and thorax.

In conclusion, I beg leave to ask, why was not this woman delivered by the efforts of nature? What was the cause of the child's death? What produced disease and adhesion of the uterus to the peritoneum, and in what manner did the same produce death? How is the occurrence and continuance of menstruation in this case to be explained?

Lubec, Maine, 1824.

MISCELLANEOUS NOTICES.

Case of Irritative Fever, from a scratch received during dissection. By A. T. Thomson, M.D.—The subject of this case was Dr Thomson himself, and the disease originated in a slight scratch received in sewing up the body of a person who had died of pleuritic inflammation. The wound was inflicted in the morning, but no unusual sensations were perceived until evening. During the night the pain was such as to prevent sleep, and was accompanied by profuse perspiration. In the morning a little pus had collected at the point wounded, the discharge of which afforded relief; but, during the forenoon, rigors and other attendant symptoms indicated the access of fever. The most marked symptom of the attack was an extreme prostration of strength, and the Doctor compares his sensations to those which are said to result from the bite of the cobra di capella, or from an overdose of Prussic acid. The respiration was laborious, and accompanied by an acute pain under the xiphoid cartilage, extending to a short distance along the sternum; while the pulse was quick, vacillating and struggling, with occasional hard throbs. Dr Thomson began by taking a mixture of camphor, ammonia, and wine of colchicum, 'to rouse the nervous energy, and at the same time clear out the bowels.' But Dr Granville being called, ordered a bolus of three grains of camphor and four of Cayenne pepper and pediluvium, which produced reaction. and some sleep was obtained during the night. The next day there was heat, dry skin, some delirium, and pulse of 130, which were relieved by a purgative of calomel, jalap, and supertartrate of potass. The treatment afterwards consisted merely of an evaporating lotion to the finger, of pills of James powder and extract of henbane, and purgatives. In a few days all unpleasant symptoms, of a general nature, subsided; but the finger became more painful, and it became necessary to open it down to the bone, not in the wounded part, but nearly an inch above it, in the second phalanx of the finger. The parts soon recovered.—*London Medical Repository.*

Instance of the use of large quantities of Calomel in a case of Meningitis. By John Davis, Esq.—The subject of this case was a child 16 months old, who was attacked Nov. 26th, 1824, by pneumonia, for which he was leeched, blistered, &c. and became convalescent. On the 30th, he was attacked by enteritis, which, by leeches and warm poultices to the abdomen, was subdued by December 2. On this day, however, he was seized with meningitis, and exhibited the usual symptoms of that disease. During its continuance, the principal internal remedy employed was calomel, given to the amount of three or five grains every three hours, part of the time combined with opium and sometimes with squills. 'By the 30th (four weeks having then elapsed) there was scarcely any thing but debility remaining. The meningeal symptoms had entirely disappeared; but the bowels were a good deal disordered. The child was reduced almost to a skeleton.' Between the 26th of November, 1824, and the 19th of January, 1825, seven weeks, this child took *sixty four scruples, more than two ounces and five drachms of calomel*, without any inflammation or affection of the gums, or any other symptom which could be attributed to this source. He continued well till the 19th of February, when he was taken suddenly with very severe bronchial inflammation, and died in six days.—*Lon. Med. Repos.*

Anchylosis of the joints of the Lower Jaw. By Mr JAMES SNELL.—The anchylosis in this case had been produced by an attempt to cure a tumour upon the lower jaw, by pressure. The head and jaw had been bound up tightly with a bandage and compress, and this apparatus was worn several weeks. Inflammation and abscess followed in the jaw and face, which only healed after a long time, and left cicatrices, which drew the mouth down in a frightful manner; and it was then found that the child could not open its mouth. The teeth were very firmly pressed together, and Mr Snell concluded that both joints were anchylosed. Food and drink were introduced entirely between the teeth.

Mr Snell recommended the extraction of the temporary teeth and the use of an instrument, which should operate by means of a spring, to act upon the two jaws in an opposite direction, and thus gradually force them open. The teeth were drawn, but this proved so great a relief to the child that the parents declined any further interference.—*Lon. Med. Repos.*

Of the Mode of Action of the Pneumo-gastric Nerves, in the Production of the Phenomena of Digestion. By MM. BRESCHET, et H. MILNE EDWARDS.—(*Archives Générales, Feb.* 1825.)—These physiologists have published an interesting memoir on this subject: and its interest is not the less that it shews, by well-conducted comparative experiments, the justness of the deductions already drawn by *rational* physiologists, from the experiments which were previously made on the subject; and evinces the correctness of the inferences deduced by them as to the relations of the galvanic influence with nervous and vital actions.

Our limits admit not of the insertion of more of this memoir than the conclusions which MM. Breschet and Edwards have drawn, with apparent accuracy, from the comparative experiments made by them.

'1st. That the division of the nerves of the eighth pair considerably retards the transformation of the aliments into chyme, without arresting it.

'2d. That this retardation of the digestive process depends upon deficient action of the muscular fibres of the stomach.

'3d. That the vomitings which often follow the section of these nerves are owing to a paralysis of the muscular fibres of the œsophagus.

'4th. That the re-establishment of the digestive process, after the division of these nerves, by means of electricity or galvanism, depends not upon the chemical action of this agent, but is owing to its exciting the movements of the muscular coats of the stomach necessary to the renewal of the surface of the alimentary bolus, and to the placing successively all the parts composing it in contact with the parietes of this viscus.

'5th. That, by means of a mechanical irritation of the inferior extremity of the divided nerve, similar effects to those produced by galvanism are occasioned, but somewhat less marked.

'6th. Finally, that the chief function of the pneumo-gastric nerves, considered only as forming a part of the digestive apparatus, is to preside over the movements of the stomach—movements which accelerate digestion, by facilitating the contact of the gastric juice with the different parts of the alimentary bolus.'—*Lon. Med. Repos.*

Use of Citric Acid in Uterine Hæmorrhage.—At the November meeting of the Royal Academy of Medicine of Paris, M. Gorat read a paper in which he recommends the use of citric acid in uterine hæmorrhage occurring after delivery, according to the following method:—

As hæmorrhage, if it supervene, generally does so within an hour after the delivery of the patient, M. Gorat advises that the Practitioner shall not leave her until after that period has elapsed. If hæmorrhage occurs, he carries into the cavity of the uterus a decorticated lemon, one end of which has been cut off, and presses out its juice on the sides of this organ: he afterwards leaves it to remain there, until the irritation occasioned by its presence, and the astringent effects of its juice, have occasioned contraction of the uterus, when the lemon is expelled with the coagulum that may have formed around it.—*Lon. Med. Repos.*

Delivery after the death of the mother. By Prosector HERRMANN of Bern.—On the third day after the death of a young woman, who was in the sixth month of her pregnancy, the nurse heard a loud noise proceed from the corpse. A physician was immediately sent for, who, on his arrival, found that the deceased had brought forth twins, which were inclosed in a membrane quite entire, and not in the least putrid. The placenta only appeared to have suffered from the effect of putrefaction. Notwithstanding the birth of the fœtuses, the abdomen was distended, and blue all over, putrefaction having advanced to a considerable degree.—*Edin. Med. and Surg. Jour.*

Remarkable Intus-susception. Mr Davies has related (*Med. Repos. Dec.* 1824.) a curious case of intus-susception, where one half of the colon was received into the other half, and where the caput coli had gone down right to the anus. 'The intus-susception had evidently commenced at the *caput cœci*, and as it extended, it doubled the colon upon itself, until the part which was first received into the portion below it, arrived at the situation already mentioned.' The case occurred in a child, six years of age, who, having eaten a quantity of raw carrots, was seized with pains in the bowels that continued more or less for eight months afterwards, when she died. The bowels, in the mean time, were regularly open, about three times a day; 'but the stools were always very thin and watery—and during the last three months, they were mixed with slime and blood.' As the lower half of the colon was lined with the inverted upper half, it followed that no part of the fœcal remains came in contact with the colon at all—the termination of the ileum being drawn down through the centre of the intus-susception to the anus. This may account for the stools being thin and watery. There was no remora in the large intestines for the formation of natural stools.—*Lon. Medico-Chir. Review.*

Knife Swallowing.—Our readers must remember the remarkable history of Cummings, the knife-eater, as related by Dr Marcet and others. The present case was the more pitiable, as the knife was swallowed involuntarily. The unhappy victim was a juggler, 28 years of age, who, while feigning the swallowing of a knife, did actually swallow it, having, by accident, let it slip out of his fingers. The knife measured nine inches in length, having a bone handle, which went foremost down the œsophagus. Various attempts were made by the surgeons in Carlisle (where the accident happened) to extract the instrument, but all to no purpose. The knife could not be felt in the throat, nor yet in the region of the stomach. This happened in the evening of November 17, 1823. Although the man was dreadfully alarmed, he did not feel any considerable pain or inconvenience at first. He was directed to keep very quiet, and to take nothing but a little cold water that night. He had some sleep, and next day experienced some pain in his stomach. The handle of the knife soon became distinctly tangible a little above the umbilicus, when the stomach was empty; but on taking food or drink, the distention of the stomach prevented the knife being felt. His sufferings were not so great as might have been expected, but still his health declined and his strength became reduced. He was able to walk about a little in the day, and could sleep at night, on his back, but not on either side. The alvine evacuations were of a dark ferruginous colour; the pulse was little affected. His diet consisted of soup, gruel, and tea, taken in small quantities. He was frequently squeamish and sick at his stomach, sometimes experiencing a severe twisting pain in that organ.

Various projects of relief were made, but none put in execution. Sir Astley Cooper was consulted, and, we believe, he recommended to cut down on the knife and extract it. The surgeons of the Carlisle Dispensary were of the same opinion unanimously, and we think they were right. Any attempt at extraction by the œsophagus we should consider as much worse than useless. Had the patient lived long enough for such dissolution of the blade as to allow the remains to pass the pylorus, death would, in all probability, ensue, from the entanglement of the ragged remains in the intestines, as was the case with his unfortunate predecessor, Cummings.

The patient remained at Carlisle till the 28th December, when he left that place, contrary to the advice of his medical attendants, for Hammersmith. He never reached his destination. The motion of the vehicle brought on inflammation and gangrene of the stomach, of which he died at Middlewich, in Cheshire, on the 16th January 1824. No authentic account of the dissection has been published by the surgeons who opened this patient, but we hope the deficiency will be filled up, when this public call reaches the parties concerned.

A case somewhat similar to the above is quoted by Dr Barnes from a small latin work, published at Leyden, in 1636, by Dr Beckher. The particulars are as follow:—A young peasant swallowed a knife, with the handle of which he was irritating the fauces to provoke vomiting. He was much frightened, but yet he was able to follow his usual avocations without much inconvenience. A meeting of the faculty having been held, it was agreed that the abdomen should be opened, an incision made into the stomach, and the knife extracted. A straight incision was made in the left hypochondrium, two fingers breadth under the false ribs, through the peritoneum. The stomach subsided and slipped from the fingers, but was at length caught hold of by means of a curved needle, and drawn out of the wound. An incision was then made into the stomach, and the knife was easily extracted. The stomach immediately collapsed. The external wound was united by sutures. The patient had a quiet night—but passed some blood in his urine. The wound went on well, and on the seventh day the patient was pronounced out of danger.—*Lon. Medico-Chir. Review.*

Substitute for the Cæsarean Section.—M. Baudelocque, the younger, has published in the Journal Universel, for July last, a proposal of this kind. The first incision is to extend along the outer border of the rectus muscle, from the umbilicus to within two inches of the pubis, not through the peritoneum. The waters are next to be let off, by rupturing the membranes, per vaginam. The thighs and legs being then half bent, the operator passes the fore finger into the inferior angle of the wound, removing the peritoneum carefully from the whole iliac fossa—and, when detached, one assistant raises up the peritoneum and mass of intestines, whilst another maintains the uterus in its situation, by applying one hand on the belly. The operator is then to introduce his right hand into the abdomen, so as to explore the iliac artery, and ascertain if there be any arteries surrounding the vagina. 'If there be any, I apply (says M. B.) a ligature at both extremities; and before cutting them, I take care to recognise the sub-pubian ligament, in order to avoid it.' The bladder being emptied by the catheter, and the rectum by glysters, the left hand, smeared with lard, is to be introduced parallel to the axis of the inferior orifice, when the vagina will be easily brought out beyond the external wound. Seizing the bistoury, he covers it with the three first fingers of the right hand, and plunges it into the vagina by the external opening, and as far as possible below its insertion into the neck of the uterus, prolonging the incision to the extent of four inches and a half. This incision made, the fœtus is expelled, by the contraction of the uterus, into the abdominal cavity, in the same way as happens in rupture of the uterus or vagina. It may be extracted with forceps.

Another mode of operating differs from the above only in respect to the peritoneum, which is divided at the same time with the abdominal parietes. The rest of the operation is rendered more easy in consequence of the section of the vagina being thus capable of greater extention.

We shall only remark that the above operations appear to us most horrible, difficult, complicated, and, we venture to prognosticate, impracticable.—*Lon. Medico-Chir. Review.*

Peculiar Spasms in Children. By John North. The disease to which Mr North's attention has been drawn, nearly resembles that described by the late Dr John Clarke, in the fourth chapter of his Commentaries. But it was long ago alluded to by Underwood, and, ten years ago, minutely described by Dr Kellie, in the 12th volume of the Ed. Med. Journal. In the year 1817, Dr Johnson published a short paper on the disease (which he denominated 'carpopedal spasm') in the 3d volume of the monthly Med. Chir. Journal. Some of these sources of information Mr North has overlooked. The affection is thus described by the acute observer last mentioned.

'The premonitory symptoms occur at an uncertain age—generally, I believe, between the third and seventh month. At first, they may not be sufficiently striking to attract the particular attention of the friends, although the practitioner, who has had opportunities of watching the progress of similar cases, might, with much confidence, predict the series of symptoms which is yet to be developed. Each time the child wakes from its sleep, the breathing is for some moments unusually accelerated, and is accompanied by such a kind of noise as would be caused by an increased secretion of the mucus of the aerial passages. If the little patient has previously enjoyed a good state of health, the characteristic rotundity of features observable in the infantile state, will quickly undergo a remarkable change. The countenance soon becomes anxious; the sides of the nose are drawn in; the face is pallid and emaciated. When put to the breast, the child sucks greedily for a moment, but suddenly ceases to do so, and frequently throws back the head, which remains rigidly extended for some time. Whatever may have been the previous condition of the bowels, they now become constipated.

'This state may continue for a very uncertain time, without any remarkable alteration: the following symptoms, however, are gradually added to those above enumerated; they occur irregularly. A convulsive affection of the hand is usually the next morbid sign which excites attention. The child's thumb will be found constantly and firmly pressed upon the palm of the hand. The wrist and ankle joints are bent rigidly inwards. The head is now almost constantly thrown backwards, keeping the anterior muscles of the neck upon the stretch. The inconvenience the child suffers, when he wakes, is no longer confined to a mere acceleration of the breathing. This symptom still continues in an aggravated degree, but the noise accompanying the respiration has gradually assumed a very different character from that which marked it at first: each respiration is now attended by a loud crouping noise, which might be heard in an adjoining apartment. The child has frequent attacks of convulsions, during which the features are much distorted. These convulsive paroxysms vary in violence and in duration in different cases; sometimes the whole body is affected. In the child of a Mons. Lambert, in whom the convulsions were frequent and severe, the state of opisthotonos was so complete, that for many days the head and heels were the only parts which touched the bed: if, with difficulty, this apparently painful position was altered by the mother, it was quickly resumed. The brow of the child is generally knit. The anxiety of the countenance is extreme. There is no febrile action in the system to be detected. No determination of blood to the head is manifested, either by an increase of heat or a flushed countenance.

'I have known the firm contraction of the thumb, the rigidly bent position of the hand and foot, and the crouping noise in respiration, continue for many weeks without intermission. The child sometimes appears lively: its countenance will be animated by a momentary cheerfulness; but it almost invariably awakens from its slumbers, however tranquil they may be apparently, with a convulsive paroxysm, similar to that which I have described. The paroxysm having terminated, the child appears much exhausted, and almost motionless for some time. Dr Clarke observes, that the term of chronic croup has been sometimes applied to this affection; "but it is very different from croup, and is altogether of a convulsive character."' p. 40.

Dr Kellie's description of this curious disease is worth stating in this place, because the pathology of the complaint has given rise to considerable discrepancy of opinion, and the disease itself does not appear to be known to the generality of practitioners.

‘But in many cases this remarkable tumour of the hands and feet has appeared to me to constitute but a part of a disease, of a somewhat more serious and striking nature. Even the swelling itself deserves a more particular description than has been bestowed upon it by Dr Underwood.

‘It has a considerable degree of roundness and elevation, and looks like that sort of tumour which might arise on the same parts from a blow or contusion. It seems to arise suddenly, as it has generally this roundness and elevation from the time of its first attracting observation. When first observed, it has somewhat of a mottled, livid, and purplish colour; I would say it looks cold like, or that it resembles the chilled hand of a full and healthy child after exposure to a cold and frosty atmosphere. It feels cold also, at least it has no inflammatory heat, and does not appear to be morbidly sensible, or to give any pain to the child when handled. It does not pit on pressure, but rather gives the sensation of firmness and resistance; and when pinched, and attempted to be moved sideways, it has always conveyed to me the notion of a disease of infants, which is known by the name of Skin-bound.

‘The swelling, which is confined to the anconal aspect of the metacarpus of the hand, and to the rotular aspect of the metatarsus of the foot, terminates abruptly at the carpus and tarsus, insomuch, indeed, that, in lusty children, it seems in these places as if confined by a cord or bandage. I have known this tumour to continue for weeks together. Sometimes it disappears in a few days, not again to return. In other instances, it has from time to time disappeared, and reappeared at short intervals. When it continues without abatement for any length of time, for a week or two, it sometimes softens, becomes looser and more compressible; its colour changes to paler, and acquires more of a leucophlegmatic hue; in a few cases it has become truly leucophlegmatic, and the œdema has spread upwards on the legs and thighs. But this is a very rare occurrence, of which I have seen but one or two examples. Its more sudden disappearance, without undergoing these changes, or without passing to the state of leucophlegmasia, is by far more common. But this swelling of the tops of the hands and feet is, according to my observation, connected, in a great proportion of cases, with another appearance of a more formidable nature, a spastic contraction of the flexor muscles of the thumbs in the upper, and of the toes in the lower extremities. The thumb is rigidly contracted, and permanently bent downwards, and laid flat upon the palm of the hand; and, in like manner, the toes are bent down to the plantar aspect of the foot. Along with the thumb, the carpus also is, in some cases, drawn thenard by a spastic contraction of its flexors, which much increases in appearance the prominence and sphericity of the metacarpal tumour. The child labouring under this state of disease is unhappy and restless, but does not appear to suffer much, if any, pain, in the parts affected, unless an attempt be made to force them from their situation; and even this forcing of the thumb or toes from their unnatural position, does not always make the child cry. Though peevish, fretful, and evidently suffering from irritation, he cannot be said to labour under pyrexia at all times. In some cases, indeed, the pulse is more frequent than in health, and towards evening there is an increase of heat, and perhaps flushing of one or both cheeks, with coldness of the feet. The bowels are commonly torpid, and the stools obtained by laxatives are, as Dr Underwood has described them, fetid and clayey, or green, sour, and slimy. This spasmodic affection, though on some days it may appear more relaxed than on others, is, upon the whole, wonderfully persistent. I have known it continue, with little abatement, for many weeks. In others, it has yielded within a shorter period, in a few days, in a week or a fortnight. In one child, who at length died of supervening marasmus, the contracted state of thumbs continued, with little occasional relaxations, for three months. The greater number of cases which I have seen have terminated favourably. I have sometimes known eclampsia to supervene to this tonic spasm of the thumbs and toes. One child had repeated fits of convulsion, on three successive days, and eventually recovered. Two others have died after supervening eclampsia. In another case of this disease, in which the thumbs and toes had been contracted for three or four weeks, fever supervened, and the child died after passing through all the symptoms of hydrencephalus acutus. Two other children, affected with the disease in question, have tardily sunk under that train of symptoms which Dr Armstrong distinguished as the hectic of teething. These are the only instances I have met with, in which this disease has had a fatal termination; and that termination, it may be observed, has been by a sort of conversion, or gradation, by the supervention of eclampsia, hydrencephalus, or abdominal fever.' 450.

In all the cases, the age was between six months and two years—consequently within the period of dentition. Dr K.

therefore looks upon dentition as the chief, though probably not the only cause of the disease in question.

Dr Johnson, in the volume before cited, has related a case, which appears to have been an exquisitely marked one of this peculiar affection—and, as it is short, we shall cite it.

'The patient was a delicate female child, nineteen months old, and cutting three or four teeth at the time. She had been ill eight days before the Reporter saw her; but according to the mother's account, there was little or no variation in the symptoms all the time. When first seen, the child three or four times in the hour was seized with spasmodic affections of the respiratory muscles, consisting of repeated attempts to fill the chest, during which she threw herself back, as in opisthotonos, and appeared as though she would be suffocated. These fits would last ten or twelve minutes, after which the child was somewhat easier, but always fretful and peevish. The backs of the hands and insteps were swoln and hard. The thumbs were rigidly contracted, and locked across the palms of the hands. The toes were bent down towards the soles of the feet, and both wrists and ankles were rigidly bent by the flexor muscles, and kept permanently so. The little patient could take no food: she was slightly feverish; the bowels torpid; and the stools clayey, slimy, and offensive. The eyes looked very heavy and inanimate. The child extremely irritable and restless both by day and by night.

'For reasons unnecessary to mention, no very active means were employed for some days, during which the child got worse, and was evidently declining fast. Hydrencephalus or eclampsia being now dreaded, leeches were applied to the temples; calomel and antimonial powder were exhibited thrice a day, and the warm bath was employed in the evening. After the bath and bleeding, the spasms went off for twelve hours entirely, and the child took some food. They returned, however, but not so violently as before, and the convulsive respiration was much relieved. The calomel and antimony were continued, as was the warm bath; and the gums were deeply scarified wherever a tooth appeared to be coming. From this time the child gradually recovered, and on the 18th day the spasms had entirely disappeared.'*

In no instance has Mr North seen the disease fatal—and we can say the same in our own practice. It is well known, however, that the late Dr Clarke, and the present most able practitioner, his brother, together with their elèves, looked, and still look upon this disease, or this train of symptoms, as indicative of hydrocephalus, or rather of that state of brain which leads to hydrocephalic effusion. The treatment is consequently the same as in the last-mentioned disease. While we do not coincide with this school in viewing the disease in so grave a light, we think it prudent, in all these cases, to guard the head, while we freely lance the gums, and act upon the bowels. It must be evident that the spasms above described can only be produced through the instrumentality of the brain and nervous system, by which all power is supplied to the muscles, whether within or without the salutary boundary. But a sympathetic affection of the brain and nervous system, as from dentition, bad secretions in the bowels, &c. is a very different thing from an idiopathic affection of the same organ, constituting an inflammation. The *latter* is dangerous, and cannot continue long without fatal consequences—the former (in which we include the subject of this article) is far less dangerous, and may go on, as the cases prove, for some weeks, or even months, and terminate favourably, without any very active measures. Still we would not advise that it should be treated too slightly, but always with the danger of cerebral inflammation or effusion, in our mind—not in the active manner of acute hydrocephalus, but as a preventive of any such supervention. This appears to be the sentiment of Mr North and of Dr Kellie.

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* Med. Chir. Journal, for May, 1817, p. 448–9.

'The treatment (says Mr N.) demanded in the above state, may be very briefly laid down. The gums should be freely lanced, if they appear swollen or inflamed. To keep the bowels open, purgatives must be freely given: calomel, in combination with powder of jalap, is perhaps the best remedy. During the convulsive paroxysm, the child should be put into a warm bath. The diet, if the child unfortunately is deprived of its mother's breast, should be very strictly attended to. The digestive powers are evidently weakened, and it is destructive to impose upon the stomach a task which it is not capable of performing, by giving solid food in any form.' 41.

We have now put our readers in possession of all we know respecting the symptoms and treatment of this disease. Its pathology is obscure. For our own parts, we think it is produced by the irritation of dentition, or by morbid secretion in the digestive organs.—*Lon. Medico-Chir. Review.*

REVIEW.

Art. VI.—*A Compendious System of Midwifery, chiefly designed to facilitate the Inquiries of those who may be pursuing this Branch of Study. Illustrated by occasional Cases. With thirteen Engravings.* By Wm. P. Dewees, M.D. Lecturer on Midwifery; Member of the American Phil. Soc. &c. Philadelphia: Carey & Lea, 1824. pp. 602.

THE author of this volume has for many years been extensively engaged in the practice of Midwifery. He has long been a private lecturer on this branch of medicine, and has already published numerous papers, and a large volume on its theories and practice. The present volume is a 'System,' and all the subjects relating to midwifery are successively treated of. Thus we have such portions of anatomy, physiology, pathology, and therapeutics, discussed as their importance, and especially the limits of the volume allowed. It is most valuable for its practical parts, and these we are very glad to see occupy most of its space. We have long doubted if systems, as they are called, are at this time, the most useful works in medicine. They must either be very general, from the great mass of facts accumulated about every individual disease, or some diseases must be very partially noticed, that others may be noticed at all. This is particularly true of midwifery. Every subdivision, and every principal department of this art, has been very fully and ably discussed, and a single volume can do little more, if faithfully composed, than contain the valuable knowledge extant on any one of them. Thus the anatomy and physiology of midwifery, which are despatched by our author in a few pages, have been yearly getting new and valuable additions, and are for practice, as well as curiosity, richly deserving of much attention from the student. But in a system, they can have but little space allowed to them, and what is hurried over by the author, will hardly excite, or repay the attention of the reader. Now we hold that in scarce any department of surgery is a correct knowledge of the anatomy of the parts concerned, more useful than in midwifery. It is very simple, and when fully understood, a degree of perfection has been attained by the practitioner, which will almost make him certain in the use of such means as cases may require. This should therefore never be scanted, especially should it never be brought in merely to give an appearance of completeness to a volume. Let there be room enough given to it, to make its descriptions clear; we refer to anatomy, and let every thing particularly belonging to midwifery in it, have all the attention it deserves. The French midwifery writers have been very faithful to this part of their subject, and it is really grateful to follow them even where they have made mathematical science contribute to their doctrines and their illustrations. To be sure, they have gone from so much accuracy of description, into much minuteness of division and classification in their practical departments; but the transition is perfectly natural, and we keep our patience, however severely it may be taxed. Some of the writers who have most followed the French have done it imperfectly. They have retained what is burdensome, with all the reasonableness which can be urged for its introduction by the French authors, but which is something worse than this, and gets to be useless, where those connected subjects are omitted, on which most of them principally depend.

Many of our remarks apply to the physiology of midwifery. Some of its points are very obscure, and some remain without any adequate explanation. But something is known. We at least know the connexion between certain states of function and the general condition of the system as it regards health or disease. Midwifery embraces functions which are accidental and contingent, and the contingencies relate to peculiarities of the female system, and to circumstances foreign to that system. Some of these functions have no necessary relation to the health of the individual. Another has such a relation. But even this last is but temporary in its influences, and continuance. There are periods in which it is wanting without harm, and this at two very different and opposite epochs of life; and whilst the system is susceptible of its returns, it may be suspended and perfectly compensated by two other functions. These two functions succeed each other, or they are not necessarily contemporaneous.

The physiology of midwifery is then both curious and useful. We have very briefly alluded to it, but it should have a very full consideration in midwifery books. The temptation is very strong, and it has not been sufficiently resisted by some writers, to admit the mechanical theory too largely in their books. The temptation to do so, exists in the facts that mechanical difficulty very frequently occurs in the accomplishment of some of the functions about which it treats, and that mechanical means are not unfrequently employed to overcome these. Now the same is true of various points in surgery, but the connected reasonings in the latter all refer, and constantly, to vital processes going on in parts which may be diseased, and it is to these ultimately, that the results of cases are referred. We have thought that sometimes our author had yielded to the temptation, or that he has not quite successfully resisted it. We might refer to the doctrine of *wedges*, at p. 391. for a ground of our belief; but there are others less broad, but not the less sure, which we shall notice as we proceed. Midwifery is an art, but it is an art in its means, not in its philosophy; and if we would give it a distinction which it deserves, or preserve what many have laboured to give it, we must keep these two things distinct from each other. Practitioners owe it to themselves to do so, and they owe it to those who have a still deeper interest in the question, their patients. They will thus preserve the art from irrational empiricism, and the sick from dangerous experiments in practice. We intend no oblique application of these remarks to our author, for we respect him too much for his long continued and able exertions on this branch of medicine, to do this. We have read his works with much care and profit, and he cannot question our motives, however free our remarks may be.

The French and English differ in several points in midwifery practice. At one period, we are not aware that the same is true now, this difference in one point had its origin in a religious opinion. Thus, in France, where it was believed that baptism was necessary to the future happiness of the infant, the mutilation of the fœtus in utero was rarely practised, to save the mother, but the latter was not unfrequently subjected to such operations as gave the child the best chance of being born alive, however dangerous these operations might be to the mother. Where from the presentation the child seemed in danger of dying before delivery, the physician baptized the presenting part early in the labour. Thus Portal in 'The compleat Practice of Men and Women Midwives:' (we copy from the translation of 1763,) tells us in flooding during labour, '— take hold, if possible of the feet (notwithstanding some of the other parts should first offer themselves) and the same being brought out, baptise them immediately with fair water, saying these words; '*Child I baptize thee*, (*if alive*,') &c. &c. p. 15. Again, 'If the feet of the child come foremost, you may take care to baptize them immediately, which done, secure the inward orifice of the womb,' &c. p. 23. 'In case the arm of the child comes forth beyond the neck of the womb, you must wrap the same up immediately in a warm cloth, dipped in warm red wine, (after you have baptized it) and then endeavour to reduce it within the neck of the womb.' The same procedure is to be adopted in the presentation of other parts. Now where this could not be done, the child being beyond the reach of the surgeon, for instance from so much deformity in the pelvis, as to prevent its advance while of its usual size, then the Cesarean or Sigaultian sections were made that the child might be delivered alive. The operation was resorted to early that the fœtus might not be destroyed by long continued and ineffectual labour.

In England very different views have prevailed, and the practice has been very different. Mutilation and craniotomy are there practised when the pelvis will allow the head or child to pass after being diminished by these operations. The Cesarean operation has been however occasionally performed in England, but almost without exception, if there be a single one, the operation in England has been fatal. This fatality it is not difficult to account for. In France the operation is done early, or as soon as it has been ascertained that the child cannot pass without fatal mutilation of some kind, or when its further remaining in the womb might be fatal. The patient is at this period of the case, an early one, in a situation to bear comparatively well a very serious operation, and it is on record how successful, under these circumstances it has been. Many children and women have been saved. The ill success in England is probably owing to delay. The woman is already in a situation of much hazard from long continued and ineffectual labour. Inflammation is probably already present, and in one of its most dangerous forms, having for its leading attendants and symptoms, high excitement, extreme irritability, and real exhaustion. The women have soon died, and examination after death has not in some cases discovered any direct effects of the operation in the organs and parts divided, to which the death could be ascribed. It has seemed either to have had no direct agency in this event, or has merely added violence to the general state and symptoms which existed before the operation.

There are various other points of difference between these two countries, in the practice of midwifery. We shall notice only one more. The instruments used in the two countries differ a good deal from each other. There are cases in which a mere difference in the external characters of things is but of little consequence. The present is not one of them. The instruments, and we refer to the forceps particularly, used in one country must be better than another, if they differ greatly from each other. They are employed for the same purposes, and under similar circumstances of cases. One of them it is highly probable, will accomplish these better than the other. This remark deserves some qualification. In the hands of the truly skilful, both of them may be equally safe. But there is not always skill or the most skill, where the occasion is the strongest. The question therefore is, which instrument is the safest and best for the mass of the profession. Dr Dewees contends for the French. We have been taught to prefer and to use the English or Scotch, and we have thought that all the objects to be had in view in the use of the forceps, have been very fully answered by these instruments. We shall very briefly examine the claims of each to preference; and we shall do this, because the English instrument is in general use in this part of the country, and because the authority of Dr Dewees may tend to unsettle what has been long established here.

The instruments of the two countries are distinguished from each other by the appellations *long* and *short* forceps. The *long* is the French, the *short* the English instrument. We shall thus distinguish them in what follows. The following quotations from the work under review, will give the author's views respecting each of them.

'699. We shall consume no time in tracing the history of these most important, but too frequently abused instruments, nor point out the alterations which caprice or the affectation of improvement have imposed upon them—we shall merely declare a decided preference in favour of the long French, or the Baudelocque forceps. An experience of many years, we think, justifies our choice; our election has not been either hastily or heedlessly made; we think we have weighed the merits of the short instruments, with due attention to their powers, and we can most truly say, that the preponderance in favour of the long, has been the result of fair and candid trials of both. We had no theory to support; we had, therefore, no prejudices to overcome; our sole desire was to determine which of the two best answered the ends for which they were designed—trials, often repeated, lead then to this conclusion—that there is no situation of the head which can be delivered by the short forceps, that cannot, with at least equal certainty, be relieved by the long; but that there are situations of the head which the long forceps can deliver, where it is entirely impossible to relieve by the short—this, in our estimation, is conclusive.'

'701. In favour of the long, we may state, that they have not one of the above objections attached to them; for they can be used in any position or distance of the head within the pelvis; that the form and length of their handles, give great and decided advantages to the operator, rendering his exertions more effective, and very much less fatiguing; and their mode of union is such, as to obviate the very serious objection urged against the short, as they lock without the vulva in high situations of the head, and remote from it in the lower positions of it—besides, they unite in themselves, the forceps, the lever, and the blunt hook.'—pp. 298, 299.

Farther on we have the following:—

'770. Smellie appears to be the first who had either sufficient skill or sufficient hardihood, to apply the forceps while the head was free above the superior strait; and since his time, he has had but few followers. This however has not arisen so much from the contemplation of its dangers, as the consciousness of its difficulties. To employ them under such circumstances with success, it is necessary that the operator should be aware of all he might encounter in his enterprize, as well as to be well skilled in their application in the situations we have just been considering; therefore it cannot be recommended as a resource to young or inexperienced practitioners.

'771. Baudelocque's observations upon this subject are so just and so important, that we must recommend them to the serious consideration of every gentleman who may intend to pursue the practice of midwifery. Fortunately, the necessity for operating with the forceps while the head is in this situation but rarely occurs, especially in this country, where the only apology for their use, namely, a narrow pelvis, is of but very rare occurrence. We have been obliged to use them but three times in this situation in five and thirty years; our experience of course is very limited. On this account especially we would wish to refer to the high authority just mentioned, and on this account also, we shall forbear to give directions for their use. We believe, that the frequent mention of difficult, dangerous, and rare operations, leads oftentimes to the unnecessary performance of them; sometimes not so much from the necessity of the cases, as the eclat which attends them, though they prove even unsuccessful. In surgery we have known it more than once to have been the case, and once certainly in midwifery.

'772. When a necessity arises to deliver, while the head is thus situated, it is much better to have recourse to the doubtful, but safer alternative, turning—for it will rarely happen, that this cannot be performed while the head remains free above the superior strait, even where the pelvis may be a little contracted, with at least as much safety to the child, and certainly more to the mother. We should therefore earnestly recommend to every unskilled practitioner, not to attempt this difficult, nay, in such hands, dangerous operation Even Smellie* himself, the original projector of the use of the forceps at the superior strait, deprecates their employment at this part of the pelvis; he says, "a long pair of forceps may take such firm hold, that, with great force and the strong purchase, the head may be delivered (from the superior strait,) but such violence is commonly fatal to the woman, by causing such an inflammation, and perhaps laceration of the parts, as is attended with mortification. In order," continues he, "to disable young practitioners from running such risks, and to free myself from the temptation of using too great force, I have always used and recommended the forceps so short in the handles, that they cannot be used with such violence as will endanger the woman's life." From this it would appear, that even in the hands of one of the most expert accoucheurs that ever lived, there was much danger attending delivery by the forceps, while the head remained at the superior strait.' pp. 326, 327.

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* Treatise, Vol. I. p. 221.

These extracts contain some very important views. They at least present us with the author's reasons for preferring the long instrument; and the reasons of Smellie, a great name in midwifery literature, against them. We reject in this case the weight of authority on both sides, and shall govern ourselves by what seems to us the superior advantages of either.

The most obvious advantage of the long instrument, is its being applicable to all cases that may require the forceps; viz. when the head is above the brim, or within the cavity of the pelvis. This advantage is to be valued partly by the frequency of occurrence of such cases as may require the greater length of the instrument, and partly by the safety of using it, even in such a case. From the evidence the frequency is almost nothing, so rare does it occur; and the evidence is equally against the safety, for we fearlessly place the authority of Smellie here against that of Baudelocque.

But are not there disadvantages against the great length of the French instrument, when the head of the fœtus is in the cavity of the pelvis, and when, confessedly, the short forceps is sufficient for its safe delivery. We think there are. The length of the instrument, in the first place, is a disadvantage; for in the introduction of a blade, the handle always interferes more or less with the extremity opposite to the side of the pelvis into which it is to be introduced, or is actually passing. So much was this found to be the case by the elder Hamilton, that he has made a hinge joint in one blade of his forceps, that the handle may be bent and the instrument thus shortened. This was still farther improved on by our late and highly respected friend Dr William C. Bowen, of Providence, by a contrivance much valued by the present Professor Hamilton, under whose immediate direction Dr Bowen pursued his studies for some years. By this contrivance the handle could be removed from the blade during its introduction, and adjusted readily to it afterwards. But there is another objection to the length of the French forceps. It cannot be very readily applied to the head without making great pressure on the perineum. Where the *clam* of the instrument, to use a term of our author, is very short, or of such a length as just to embrace the standard fœtal head, as in Haighton's instrument, the pressure of the perineum is always complained of; but where it is very long, as in the French, this pressure is necessarily greater, since the points of the instrument cannot reach their ordinary situation but by a great sweep forwards. When the head is above the brim, this pressure must become immense; how much so, may be understood at once by referring to Dr Davis's long craniotomy forceps, which has its perfection and its safety in the double curve which he has so very ingeniously given to it.

We must object to the long instrument, its size, its mode of locking, and its complexity. We have in our possession a series of this instrument, which makes a tolerable history of the changes it has undergone. It was at first very simple. Its mode of locking is by passing the *clam* of one blade through the opening of the other—of course after one was already in the pelvis. To accomplish this, a great degree of length was necessary, since a part of the opening must be external of the vagina to allow this to be done. We have thought that the continuance of its great length through the succeeding history of the instrument, may have its explanation in this awkward fact in the earlier periods. To this succeeded a screw, first passed through projecting pieces of iron on the sides of the handles of the instrument about midway; then a screw, which passed through the centres of the handles, where they were made to cross each other. The latest is an improvement not very important on this. The size in all cases has continued great. We have an instrument recently imported from France, which, in its monstrous proportions and weight, seems to be a caricature of French art and practice. We object to size and weight here, because the one enables the practitioner to use great powers, and the other is injurious by its mechanical pressure. In actual practice, these are both to be considered, for both come then into direct operation, and it is not difficult to understand what their effects may be.

The mode of locking and the complexity of the long instrument, may be noticed together. The ease of locking either instrument depends simply and entirely on its being properly applied. You can force neither of them to a lock, without injury to the mother or child. The two portions of the instrument must exactly oppose each other, or be in perfect opposition. If they do not, they not only cannot be locked, but they cannot embrace the head in parts directly opposite each other, and will infallibly slip when any exertion is made with them. If properly applied, the short forceps is locked by simply bringing the handles of the blades into contact. A screw must be adjusted in the long ones. The whole question is which is least embarrassing, an instrument which is a whole in itself, or one which is to be made so by the addition of something else. An objection is made to the short instrument, because it locks very near the perineum, and may have some of the neighbouring parts or appendages included within the lock, and that this will unnecessarily increase the sufferings of the patient. This is true, but it can occur only from most unwarrantable carelessness. It need never occur, and we have never known it happen. A mere sweep of the finger round the instrument after its parts are adjusted, ascertains this point at once without the possibility of mistake, and this of course is always done. The long instrument is rendered complex by other things besides the mode of connecting its parts. It combines many other instruments. It is a forceps, a lever, a blunt hook, a crotchet, and one we have before alluded to for its size and weight is with all these things a *pelvimeter*. If it is wise in philosophy not to multiply causes, it is equally so in surgery, not to render its individual means, so to speak, complex. It is a dangerous neighbourhood which the French forceps enjoys. There is a choice of means, where the case supposes no doubt; and it is a case too, in which there may be hazard, in anticipating chances, with a variety of means *in hand*, to meet the worst of them. The instrument is made cumbersome by this complexity, and there are cases in which this fact in its history may be something worse than embarrassing.

The circumstances now mentioned with some others, have long led us to prefer the English instrument. It is of sufficient length, is light, and exceedingly simple. It is powerful enough, or we have not known it fail in cases which seemed proper for the forceps. It may be that education has had some influence in this preference. Hamilton and Haighton both taught us the sufficiency of the short instrument, and the disadvantages of the long one. Not that we would be supposed here to have advanced their arguments in our remarks. Our education may have had more to do with our preferences than we may feel willing to acknowledge; but we are very unwilling that our own views should find their defences elsewhere than with ourselves. While we are on this subject, we cannot refrain from alluding to what has particularly struck us in this and other works of our author. We mean his great preference for French writers on midwifery. We have before spoken in the highest praise of the authors of that country, and repeat here how much the art owes to them. We have particularized anatomy, and we may here add physiology. Their great devotion to these, particularly the first, has led them into exceedingly nice and somewhat multiplied divisions of labour, or of position. Some of their writers, and especially the earlier ones, have dwelt on the mechanism of labour with great mathematical preciseness. One who will patiently examine Levret's work, for instance, cannot but be struck with his zeal and his power. But with all this we cannot hold them to be exclusive authors for the student or practitioner. In Great Britain the art has received a vast and excellent labour, and we have followed their later writers down to this time, and have always been profited by the pursuit. Denman, comparatively an early writer, had to labour with the state of the art as he found it, and he left much to be discovered by those who should come after him. But we think he did a vast deal for midwifery, and that his name will not be lost from the list of its most useful writers. The literary part of his work is peculiarly excellent, and we should place him amongst the very best writers in the profession. We are aware that, with our author, Denman has not so high a name as we have given him, and that Baudelocque is his favourite writer. The reputation of Baudelocque does not require any thing from us, and we do not question his high value as an authority. Still we are willing to confess, that it would have gratified us in a professed system, to have found more reference to English writers, and especially to their practice. They have been proverbial for their superior ability, as practitioners in medicine, compared with their continental brethren; and they have in no sense neglected the whole practical department of midwifery.

It is not designed in this article to make an analysis of this volume. We shall briefly notice a portion of its contents. And first of '*Displacements* of the uterus.' This is a translation of the French word *déplacemens*, and is a better one, as used by the author, than *displacing*, as it is rendered in the dictionary. Some writers have used the term *fall* to express the changes in place to which the uterus is liable; but as this seems properly applied to only one of these, a term of more general application is desirable, and the new one employed by the author answers very well. He first describes Retroversion. This word, it is well known, expresses that change in place of the uterus, in which the fundus falls backward and downward, while the neck is projected forward, and it may be upward. It is treated of by Dr D. as it occurs in pregnancy, and in the unimpregnated state, and as produced by accidents in the one case, and by the same and other causes, in the other. There is one cause not mentioned, which, however, deserves a distinct place in the enumeration. This is what has been termed by a writer in the Edinburgh Medical and Surgical Journal, 'Simple chronic inflammation of the uterus.' The effect of this disease is enlargement of the organ; and if this enlargement occur principally in the body or fundus, a change in place may be the consequence. It may be facilitated by relaxation, or a morbid condition of the natural supports of the womb, and by slight accidents, as sudden movements of the body, over exertion, &c. The fundus falls back, because the hollow of the sacrum and the greater room in that part of the pelvis, favours its inclination, and reception there. In the twelfth volume of this Journal, we gave an abridgment of Dr Robertson's paper. We thought the views original and very interesting, and, from subsequent observation, have been led to think that much of the pain and suffering experienced in the uterine region in many cases, may have had its cause in the form of inflammation described by Dr Robertson, and have, like him, found a similar practice productive of much good. We cannot say that we have found the complication of retroversion noticed by him, but fully believe, from his statement, that such may be the case. Our author has not noticed this state of the womb in its connexion with retroversion; and we beg leave to draw his attention as well as his and our readers, to Dr Robertson's very valuable paper on the subject. Our reasons for this recommendation will appear from the following part of section 185 in the work. 'In the unimpregnated state of the uterus, the symptoms, so far as we have observed, are never so distressing; the reason for this will be easily comprehended; but the parts never become entirely reconciled to this new situation.' The cases published by Dr R. show that this statement has need of much qualification.

How this displacement should be treated is a pretty important point, for there are many methods in use, and good authority for many of them. We quote the following from Dr Dewees.

'192. As the most pressing symptom in retroversion is the stoppage of the urine, we should most sedulously endeavour to prevent this being of too long continuance; the consequences should be candidly stated to the woman, should she permit her delicacy to interrupt an essential point of duty. The catheter should be employed *pro re nata;* and the bowels emptied daily, either by medicine of a mild kind, or by injections; if this plan should not succeed in restoring the fundus, we should then maturely consider the propriety of mechanically replacing it: to aid us in our judgment, we should consider, first, the period of gestation; secondly, the degree of development the uterus has undergone; thirdly, the nature or severity of existing symptoms. The period of gestation should almost always influence our conduct in this complaint; and we may lay it down as a general rule, the nearer that period approaches four months, will be the necessity to act promptly in procuring the restoration of the fundus; the reason for this is obvious, every day after this will but increase the difficulty of restoration, from the continually augmenting size of the ovum. The degree of development should also be taken into consideration, as some uteri are as much expanded at three months as others are at four; consequently, when this obtains, there is a decided reason for acting earlier than may at other times be necessary; so also at the fourth month, if the development be less than is usual for that period: we may, every thing being equal, delay the attempt at reposition if any reason present itself to make this eligible. The extent or severity of symptoms must ever be kept in view; as, for instance, where the suppression of urine is complete, and not to be relieved by the catheter, in consequence of the extreme difficulty or impossibility to pass it: here we must not temporize too long, lest the bladder become inflamed,[*] gangrenous,[†] or burst.[‡] For the bladder, from its very organization, cannot bear distention beyond a certain degree, or beyond a certain time, without suffering serious mischief.

'193. From this we conclude, that the uterus should in every instance be restored when practicable, at or very little after the fourth month; if left longer than this, the risk of not succeeding is every day increased; and we are firmly of opinion, that nothing can justify a neglect to do so at this time, more especially when it proceeds from the vain hope, that nature will relieve herself at the full period of gestation.'[§] pp. 86, 87.

We have thought much of this matter, and still do not feel satisfied with the course prescribed by Dr D. in this quotation. We may have expressed ourselves too strongly, in saying the 'course prescribed' by the author. His language is not very precise; and we understand him as saying and teaching, that attempts to reduce the displaced organ need not be made before the fourth, or at, or a very little after the fourth month. This to us is not sound doctrine. We regard retroversion of the *gravid* womb a great evil; an evil which is constantly, and in early pregnancy, rapidly increasing. It is a state of things which will rarely remedy itself. We are not to trust to, or look for spontaneous relief. Important functions are mechanically impeded from the first moment of retroversion. It is an inconvenience at first, but, in its progress, becomes an evil of great amount. There is much pain and suffering, and there is much danger. We have no very precise means of ascertaining the time of pregnancy. We are as liable to be deceived by the patient's report on this point, as by our examinations with all their elaborate and imposing formalities. Irreducible retroversion is fatal. It has been so by itself; and the best means of art have not always diminished the danger. Delay in reducing the organ has been the principal cause of the suffering and the disaster. We believe we have not placed the difficulty or danger beyond what actual occurrences as recorded, fully warrant. Now, if these views are supported by the record, we see no reason for delay, after we have ascertained the cause of the symptoms, or the situation of the uterus. If it be the first, the second, the third, or the fourth month of pregnancy when we discover retroversion, we regard the true practice to be, the reduction of the organ without delay. It is always to be done during pregnancy where it is possible, and in all cases the sooner it be done the easier and the better. It is no good argument against reduction, that the organ may fall again into the situation from which we have moved it. If this happen, put it again in place. Keep the woman still and in the horizontal position on one side; let the hips be somewhat elevated, and let the bladder and rectum be artificially emptied, if this assistance be necessary. We contend that an unnatural state of an organ, though it be change in place merely, is never so wholly unimportant that it may be left without treatment. That of the uterus in question is daily growing more and more unmanageable, and we may find ourselves foiled in our attempts at relief at the very moment when we promise ourselves the most perfect success, viz. when we have delayed the operation till the uterus, in the progress of pregnancy, has attained such dimensions as to derive sure support from the brim of the pelvis, or other parts when reduction is made. In fewer words, we may not be able to make it with such means as are safe to the mother and fœtus.

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[*] Dr Bell, Med. Facts, vol. iii. p. 32.

[†] Mr Lynn, Med. Obs. vol. v. p. 388.

[‡] Dr Squire, Med. Review for 1801.

[§] Merriman.

In retroversion from 'simple chronic inflammation,' a very different indication presents itself. Reduction in this is not the first thing to be attempted. The gentlest examination of the inflamed organ produces excessive pain, and the patient can hardly submit to this. The greater effort which reduction would require could not be borne at all. The indication here is to remove the disease of the organ, and then to put it into its proper place. The bladder and rectum, from the mechanical embarrassment to which they are subjected in this case, deserve most particular attention.

Prolapsus uteri follows after the 'signs which usually accompany pregnancy,' and these last immediately follow 'displacements of the uterus.' It occurred to us that the arrangement would have been more natural, had *prolapsus* been put among the displacements. Gardien makes prolapsus the first chapter under his Article (III.) *Changemens dans la situation de la matrice.* His second chapter of this article is *retroversion* and *antiversion;* his third, *obliquity of the uterus.* This arrangement is a natural one; for prolapsus, as noticed by the author, is not a sign or disease of pregnancy exactly, or has it such a relation to that state as to make its separate consideration immediately after the history of pregnancy the most convenient. It is an accident of the unimpregnated state of the womb, and if taken in strict connexion with its most ordinary cause, might follow *labour;* we, however, think its place in Gardien the best.

Mr Clarke in his admirable work on the Diseases of Females, accompanied by Discharges, places prolapsus uteri among the diseases attended with *mucous* discharge. This last is in fact nothing more than an increase of what is natural, and is the effect of mechanical pressure on the mucous membrane of the vagina, produced by the new situation of the uterus. Prolapsus may be, as Dr Dewees supposes, an effect of a morbid state of the vagina, one of the consequences of which state is an increased discharge. We have made these remarks on a symptom of prolapsus from meeting with the following in our author. 'In addition to the inconveniences we have just stated, there is always a discharge of more or less matter of a *purulent* appearance from the vagina; this, in severe cases, is tinged frequently with blood, and is sometimes offensive.'

When these changes in the natural state of the ordinary secretion of a part occurs, we are always disposed to regard the case as something more than simple prolapsus. It is not merely that the uterus is out of place, and the vaginal secretion increased by its mechanical agency; but some change in the process itself, and this a morbid one has occurred, and it is this which gives a morbid character to the fluid. We are unwilling to incur the charge of being hypercritical in our remarks, and would add that the distinctions here suggested, should influence the practice. We are in other words not merely to restore the womb to its proper place and keep it there, but it which furnishes no ground for scepticism. We have not very often made trial of this treatment, and perhaps Dr Dewees will hardly allow that we have ever fully adopted it. Two cases are fresh in our recollection, in which bloodletting seemed fully authorized by the circumstances, and in which it was used. The first was a case in which the os externum was so small, or the perineum so extended, that an insurmountable obstacle seemed put to delivery. In this case the efforts of the womb were unusually violent, long continued, and recurred with uncommon frequency. A full bloodletting was practised. It did not produce faintness, but the blood was allowed to flow until from the quantity drawn, it was deemed unsafe to permit farther loss. It produced no effect on the part for the relief of which it was employed. In the second case, the difficulty existed in the os uteri. A very full bloodletting was employed and repeated, but without benefit. These cases are not mentioned with a view to diminish confidence in the method recommended by the author; nor was their result the reason why we have not adopted it more frequently. They occurred to us before we had read the author's writings on this subject, and were in every respect such cases as he has more particularly in view. We have not employed the remedy very frequently, because we have not thought it often indicated in such instances of difficult labour as have occurred, and we have found other methods in other cases to answer perfectly well.

We have, however, noticed this part of the volume not so much for its practical as for its theoretical doctrines. We refer to the doctrine of *rigidity* of parts, which is not only incidentally mentioned, but which has a distinct place in the work. The following quotations have Dr Dewees' views on this subject.

'889. Writers upon midwifery have but very imperfectly considered the rigidity of the soft parts as a cause of difficult or tedious labour—some indeed do not mention it, and others do so, merely en passant, without proposing any specific treatment for its relief. It is so common a case that every practitioner must have met with it; but it has failed to make a proper impression, because time and severe suffering have eventually overcome it, though not always with safety to either mother or child.

'890. It is decidedly the most frequent cause of tedious labour; and it may occur in those we regard as strictly natural, as well as those which are confessedly preternatural; and when it does occur in the latter, it adds much to its difficulties, while it renders the former tedious and terribly painful. We cannot pretend to point out the cause of this rigidity; we shall, therefore, not lose ourselves in the wilds of conjecture, but merely state the various conditions under which it may present itself.'—pp. 368, 9.

What this term *rigidity* precisely means in this connexion, we do not learn from the author, or from any other writer who has used it. Is it a morbid state of these parts,—and if so, when did the disease begin. Has it been marked by symptoms in any or every part of its history, and if so, what are these symptoms? As far as we have been able to understand this term, it is meant to express a perfectly natural, the most natural state of the parts in which it exists. It is in no sense a diseased state, but wholly and merely such a condition of organs as has subsisted through the whole period of pregnancy, and such as is always present just before the occurrence of any or all labours. But why is it we may now be asked, that in the majority of cases, these parts are in a very different state, from that termed rigid; such a one, for instance, as is most favourable and necessary to easy delivery? In answer to this question, we shall in a few words state our whole views on this interesting process.

Labour then, we remark, in the first place, is a purely *functional* process. It has in no part of it, and in no moment of it, any thing approaching to a mechanical operation. The womb does not contract, and especially does not its mouth open by the least mechanical agency. It is wholly and exclusively an organic function, essentially depending on the vitality of the parts in which it occurs. We shall adduce but a single fact to prove this, and set the question entirely at rest. We refer to that most curious fact, the contraction of the uterus, the dilatation of its mouth, the discharge of mucus from the vagina, which take place at the termination of nine months in *extra-uterine gestation.* Every thing happens here which occurs in uterine pregnancy. Every essential function in other cases, occurs as completely in this as if it exactly resembled them, but there is no fœtus acting like a wedge, on one part; or as a stimulus upon another. The phenomena continue for a time, and then in beautiful correspondence to what is observed in other anomalous, or misplaced functions, they cease. We might to the same purpose refer here to those very strange cases in which labour has occurred in *uterine* pregnancy; in which the common changes have happened in the mouth of the womb; but afterwards labour has ceased and the fœtus has been carried in at least one case with but little inconvenience, in the body for many years. In a very remarkable instance of this kind in the fifth volume of the Medico-Chirurgical Transactions, it is supposed that partial laceration of the womb occurred, and that the peritoneum only remained entire. We have published in another part of this number a case to the same point.

But where, or in what part does this process of labour begin? Is it a simultaneous function, developed at once in every part of the womb; or does it not begin in some one portion, and have connected with it afterwards the functions of other parts? We are inclined to the last opinion, and believe that the first manifestation of labour is in the neck, or most inferior portion of this structure, and that the functional changes which occur here, are followed by active contraction of the other portions of the organ. We have adopted this explanation from the whole history of the gravid womb. This shows us that the neck is the last part of the organ that comes to contribute its portion for the accommodation of the fœtus, or is the last portion to be done away with in the gradual development of the organ in pregnancy. Especially are we taught this by the well known fact, that at the termination of pregnancy, no portion of the neck remains, and at that moment the os uteri is found soft, yielding, discharging the dense mucus it has retained for many months; and the new function just taking place in it, is the secreting of a greater quantity, and of less consistency. That the function of labour first begins in the os or cervix uteri, is manifest farther, from a consideration of those cases, in which a *shew* occurs for three or more days before the least uneasiness is felt in the abdomen, and in which examination has discovered a dilatable state of the part; it giving no resistance in short to a dilating force. In these cases almost the first intimation the individual receives of labour being present, is a discharge of water, it may be when visiting or occupied in domestic concerns, and almost simultaneously with it, is a rapid descent and delivery of the child. That the state of the neck of the womb now referred to, its functional preparation for the passage of the child, is the efficient cause of uterine contraction, is finally proved by the well known effect of artificially dilating the mouth of the womb to effect abortion; violence here indirectly performs the part of function, or more properly excites it, and delivery is the effect.

Labour then is a function of the gravid womb. It begins in the neck and mouth of the organ, and the other portions sympathize with the functions which have occurred in these. There is nothing mechanical in this process in its most healthy state, and the difficulties occasionally met with in it, are not removed by a mechanical agency of the parts concerned. But it does happen sometimes that severe pain is felt in the uterine tumour occurring at intervals, and continuing a long time, and still the mouth of the womb remains unaltered. How are these cases to be reconciled with our theory? These, we answer, are not cases of labour, using this term after its true import. Labour we say has not occurred in these cases; it does not exist. The state of things supposed no more corresponds to true or healthy labour than colic does with the genuine peristaltic movement of the bowels; and you might as naturally look for fecal discharges in the one case, as for the descent of the fœtus in the other. The mouth and neck of the womb remain as they have been during the whole of pregnancy. They are in no sense *rigid*, nor indisposed to their healthy functions. These functions have only not occurred. The muscular apparatus of the womb has been indeed excited to action, and it may be a violent one; but it is not genuine labour, for it is not an associated function with something else, which should have preceded it. It will hence not expel the child, for its direction is no more downward than upward; and it will not dilate the mouth of the womb, unless it rupture it, which may be the case if the direction of the power be violently toward this part; but ineffectual labour will go on, until the woman is exhausted, or until opium or bloodletting be used to check it. The treatment of these cases by the former remedy, may make the subject of a paper hereafter.

We are willing to confess here, that it has happened that spurious labour has ultimately been followed, or has produced genuine labour; or, that what begun wrong, has gradually worked itself right. But these cases furnish no argument against the views advocated above. Something of the same kind happens in disease, in colic for instance, before alluded to in illustration. But this is no proof that a violent and spasmodic action of the muscles of the bowels is a natural process, or the common function by which these organs empty themselves. We have dwelt upon this subject because we think it a very important one, and involving much that is practical. We are able to explain by the views offered above, much that has remained obscure, and which has created much embarrassment in practice. We shall only mention one case which it elucidates. It is when the anterior lip of the mouth of the womb is found protruding along with or before the fetal head in the pelvis, and which is almost always a cause of great delay and of much suffering. In this case the whole of this part has not undergone the ordinary preparation for delivery. It has not perfectly performed the functions antecedent to genuine labour. The actions of the womb are less regular than common. Swelling takes place in the protruding portion of the organ, and much mischief may take place. If we are not mistaken, this case is termed by the author *anterior obliquity* of the womb, and a mechanical treatment by pressure, and the position on the back are recommended to facilitate delivery. From much examination of it we have been disposed to attribute it to the cause we have just mentioned.

If the views now attempted to be supported, be correct, the question next in order is, what are their relations to practice? By what means may we best suspend the useless and illtimed efforts of the womb, and at the same time favour in it the occurrence of natural functions. Dr Dewees has used bloodletting in these cases with great success. We have used preparations of opium. In some cases, the effects of opium have been most striking. Genuine labour has occurred under full doses, and delivery been completed in a time so short as could hardly have been predicted. We have no doubt they may be frequently employed advantageously together, or either of them separately. It is not our purpose here to enumerate the cases for either course.

The length of this article warns us to bring it to a close. We could with great pleasure have noticed other parts of this volume. One part we meant to have glanced at; this is the recommendation by the author of the *tampon*, in uterine hemorrhage. It may be a prejudice of education, but we shall never forget with what emphasis Professor Hamilton of Edinburgh opposed its use, in his lectures. We have never employed it, unless a mass of ice or snow introduced into the vagina amount to the same thing. Mechanical obstruction to the flow of blood may, in hemorrhage in early pregnancy, do no harm, or even be useful. For hemorrhage during or after labour at the full time, we do not feel disposed to recommend it. We are satisfied that in the author's hands it has been safe, and beneficial, but we are aware that his eminent skill, and excellent judgment, would not accompany our recommendation of it. We have already expressed the pleasure with which we have read this volume. We feel grateful to the author that he has found time in a wide and fatiguing practice to record his experience, and has with much curious speculation, made public the results of so much useful practice. If we have differed from him, it is in a few things only, and the greater portion of his volume remains for our free recommendation. We have observed occasional, but not very glaring defects in the literary composition of his work, but have not stopped to note them. Taste is after all, an arbitrary thing, and what has struck us as faults, may find many advocates. The author's literary industry will be rewarded amongst us, with patronage and influence. Feeling this, although we are not so arrogant as to give advice, yet we may express the hope that he will not too rapidly multiply his publications.

Art. VII.—*A Treatise on Inflammation of the Mucous Membrane of the Lungs. To which is prefixed an experimental inquiry respecting the contractile power of the blood vessels, and the nature of Inflammation.* By Charles Hastings, M. D. Physician to the Worcester Infirmary; late President of the Royal Medical Society, Edinburgh, &c. pp. 420. London. 1820.

THIS work has already been several years before the public, and we have not deferred our notice of it, from any insensibility to its merits, or from the want of a due impression of the importance of the subjects of which it treats. In fact it appears to us deserving of attention, both on account of its intrinsic value, which is not small, and from its presenting pulmonary affections in a point of view in which physicians in general are not in the habit of regarding them.

In the theoretical discussions which this book contains, Dr Hastings exhibits evidences of a very careful investigation of the doctrines that are examined; and the opinions which he espouses are supported with considerable talent and learning. The practical parts are, however, more valuable and have been prepared with judgment and discernment. The author appears to have inquired very thoroughly into his subject, and founds his history of the disease and its treatment, on an accurate acquaintance with what others have written upon it, as well as upon the results of his own experience, which although apparently not very extensive, has been well directed.

In ordinary practice, physicians are not in the habit of attempting to discriminate very accurately, the particular texture or textures of an organ which is the seat of disease. We are generally contented with satisfying ourselves that the affection resides in this or that particular organ, considered as a whole, and too seldom give ourselves the trouble to reflect that the organs are all of them compounded of different parts, which in relation to disease, are oftentimes as distinct as separate organs. This is particularly the case with regard to affections of the lungs. From the situation of these organs, their want of sensibility and the nature of their function, they do not exhibit, under different circumstances, so great a variety of symptoms, as many other parts—or at least they do not exhibit symptoms which upon a rapid and superficial examination are so readily discriminated. Cough, expectoration, difficulty of breathing in its various modes, oppression, and pains about the chest—these are the principal symptoms which attract the notice of practitioners in the hasty glance which they bestow upon a large proportion of those patients who are but slightly sick, in the routine of business. These symptoms are common to almost all complaints, not of the lungs merely, but also of the other organs within the chest, and instances are not rare in which a disease of a very severe character, has been considered very slight, till a sudden and melancholy termination has proved the contrary. Now although we do not believe that any thing like an infallibility of judgment can ever be acquired in a science so imperfectly understood as Medicine is and always must be, yet we do believe, that accurate observation may improve it almost indefinitely. Accurate observation, for instance, may teach us to discriminate pretty certainly, between the affections of the different organs within the chest, and of the affections also of the different textures of those several organs, although on a slight examination they may appear involved in inextricable obscurity. Still till within a short time, many of these distinctions have not been adverted to in works on the pathology and treatment of diseases. Till the appearance of the volume of Dr Badham on Bronchitis, there was, we believe, no distinct treatise on inflammations of the mucous membrane of the lungs, as distinguished from inflammations of the cellular or serous. Judicious practitioners were no doubt aware that great differences existed between different cases of what was called Pneumonia, and adapted their practice accordingly. Allusions are found in many writers which indicate that they were aware of the existence of distinctions of this kind—but they had not been clearly and intelligibly pointed out and commented on. Dr Badham led the way on this important subject, and to his valuable treatise we may now add that of Dr Hastings, which occupies in part the same ground.

The first hundred pages of this volume are occupied in the discussion of some theoretical questions, which being but remotely connected with the main objects of the work, we pass over entirely. They contain an 'Experimental inquiry respecting the contractile powers of the blood vessels and the Nature of Inflammation.'

In the second Chapter is contained an account of the opinions of preceding writers respecting bronchial inflammation. This is a very complete and interesting view of the history of medical opinions on this subject, but although well worthy of perusal, is not of a nature to permit of analysis, since it is in itself an analysis of the writings of others.

The subject of the third Chapter is acute bronchitis or acute inflammation of the mucous membrane lining the lungs. This disease has several varieties; of these the First is the common catarrh, which is the mildest form under which it is observed. The symptoms of this complaint are sufficiently familiar, and are all of a nature clearly to indicate their origin in an inflammatory affection of the mucous membrane of the trachea and bronchia. This variety is occasionally found to pass into disease of a more severe character, or to degenerate into an obstinate chronic affection. The disease may even spread from the texture first affected to the other textures of the lungs and the patient die of tubercular phthisis.

2. The second variety occurs in old people and in those of phlegmatic habits, under the same circumstances which commonly produce catarrhal and pneumonic affections, and corresponds to the peripneumonia notha of nosologists. Although often mild, to appearance, on its accession, it is in reality a formidable disease. The febrile symptoms at the commencement are slight. There is no fixed pain in the chest but a good deal of soreness, straitness and uneasiness, with a distressed countenance and an oppression about the precordia. The respiration is quick and laborious, and in the course of the disease, becomes wheezing or rattling from the presence of mucus in the air passages. The difficulty of breathing is aggravated at particular times, and resembles the breathing of asthma. The cough is generally, though not always, accompanied by some expectoration from the first. Early expectoration, however, does not relieve; but in the progress of the complaint, especially if it go on favourably, a large quantity of thick viscid opaque mucus is spit up with relief. The cough, like the dyspnœa, comes on at intervals, but the two symptoms are by no means in proportion to each other in violence, although both are generally relieved by copious expectoration. The head is affected with violent pain; the tongue varies in its appearances, but always deviates from the healthy state. The pulse in the beginning is not much more frequent than natural, and the skin is generally dry. The duration of the disease is uncertain—indeed in many cases it is difficult to decide exactly, when it began, so insidious is its attack. Some cases of a severe character undergo an unfavourable change on the seventh or eighth day—the pulse becomes very quick and weak, perspirations break out; the nails and lips assume a slightly livid hue, whilst the countenance is distressed, anxious, pallid and purplish. Every symptom bespeaks obstruction in the air passages, the extremities grow cold, and dissolution ensues.

In favourable cases the disease begins to subside in six or seven days; but recovery is slow, and the patient is left extremely liable to be affected by atmospheric changes. Sometimes it terminates in chronic bronchitis, and sometimes in hydrothorax.

3. The third variety of bronchitis takes place in the strong and plethoric and begins with great severity. The peculiarities of this variety are the great paleness of the countenance, co-existing with symptoms of violent reaction—the rapid progress of the symptoms—the violence of the dyspnœa, straitness and oppression in the chest, compared with the cough; the want of expectoration, and generally the absence of any considerable pain. In fatal cases the stage of collapse rapidly comes on and is indicated by orthopnœa, livid lips, sinking pulse, cold and damp skin, and stoppage of expectoration. In those which terminate favourably, the course of the disease does not vary essentially from the preceding varieties.

4. This includes the bronchitis of children—a complaint very frequent among us, and known commonly by the names of lung fever or catarrhal fever. Dr Hastings describes it as an affection proving more speedily fatal in many cases, than the preceding variety; but not exhibiting any such decided and obvious symptoms of a dangerous tendency, as will put the practitioner on his guard. It is in this respect very deceptive. As it is a disease with which our readers are probably, most of them, pretty familiar, we quote Dr Hastings' account of it, that they may compare his description with their own observation.

'The respiration is more frequent than in health, and very generally a wheezing noise may be heard, but the dyspnœa is not considerable, and the patient does not seem uneasy in the horizontal posture; in fact, is not more distressed in these respects than is customary in a severe catarrh. A cough always attends; but it is often slight, and is rarely accompanied with any expectoration, unless vomiting is produced.

'The tongue is often loaded, but sometimes it has a natural appearance. The child rarely refuses sustenance, and the fever in many cases is not considerable. The pallidity of countenance is very remarkable, and is for the most part observed soon after the attack commences. Early in the attack we often find the pulse hard and frequent; but the hardness in the majority of cases soon goes off, and the frequency alone remains.

'As the disease advances there is often an extraordinary variation in the state of the breathing and pulse. The breathing for several hours occasionally appears so free and easy as to lead the practitioner to expect that he has subdued the disease, and that the child will recover, when suddenly a great aggravation of the difficulty of breathing takes place, so as sometimes to threaten immediate suffocation; but by degrees the urgency of the dyspnœa subsides, and the breathing apparently becomes in some instances even nearly natural, and remains so till another aggravation of the symptoms occurs, which may not happen for a considerable time. These remissions and exacerbations continue throughout the disease. During the remissions the child often dozes, and is not much distressed by the cough. The state of the pulse evidently, in a great degree, depends on that of the breathing. During the exacerbations it is very much quickened, and is often fluttering; but as the urgency of the dyspnœa remits, it generally becomes much slower.

'The disease is not stationary, the symptoms soon become more distressing. The aggravations of the difficulty of breathing are more alarming, and the remissions less perfect. The child often falls into a comatose state. A slightly livid tinge makes its appearance on the lips, from which the pallid cheeks are not entirely free. Even at this late period gleams of hope sometimes burst upon us. For a short time the difficulty of breathing may seem to subside, and the child to be better. But these hopes are never realized; even the next exacerbation of the symptoms may terminate in suffocation.

'In the more urgent cases the course of the disease does not take up more than seventy-two hours; and in those whose progress is not so rapid it usually terminates in less than five or six days.'—pp. 168-170.

5. The fifth variety includes those cases in which bronchial inflammation occurs in connexion with some cutaneous disease. This happens with regard to erysipelas, of which Dr Hastings mentions some cases that occurred in the Worcester Infirmary, where the pulmonic affection went on with violence, although the original disease, the erysipelas, continued its progress without abatement or intermission.

The lungs suffer also very frequently in Measles. Symptoms of a secondary pulmonic affection in this disease are so common in a slight degree, that the severe cases in which the bronchial membrane is highly inflamed, come on insidiously, and the patient is in the utmost danger before the friends become alarmed. This attack occasionally resembles croup, and it is always much more obstinate than one of the same severity proceeding from cold.

6. Bronchitis is often combined with and accompanied by diseases of the abdominal viscera. This is particularly the case with drunkards, who become the subjects of an affection of the liver, which by its irritation produces an influence upon the mucous membrane of the lungs, and thus bronchitis becomes complicated with hepatitis, both acute and chronic, with gastritis, and inflammation of the peritoneum.

7. Under this head, Dr Hastings speaks 'of bronchitis as rendered obscure by co-existing diseases, and as unattended with its usual symptoms.' 'There is no disease which more

commonly occurs in conjunction with bronchitis, than chronic inflammation of the larynx and upper part of the trachea.' This inflammation, when suffered to go on without interruption, generally terminates in an incurable ulcer, and in all its stages, the subject of it, upon exposure to cold, is very liable to an attack of acute bronchitis, which under these circumstances, is a difficult and dangerous disease.

The peculiar symptoms of chronic inflammation of the larynx and trachea are, a tickling cough, aggravated by pressure on the trachea, a tenderness and soreness in some part of the larynx or trachea—a change of the voice, the patient often speaking in hoarse whispers, and the expectoration of a dense mucus. When ulceration has taken place, the voice is more affected, the cough harassing, with purulent expectoration, anxiety of countenance and laborious respiration, without pain in the chest, but occasionally in the epigastrium after long continued dyspnœa. Upon these symptoms those of acute bronchitis may supervene and prove speedily fatal, if not vigorous combatted.

But the most distressing and fatal form under which bronchitis appears, is that produced by tumours pressing upon the windpipe and involving at once both the tumour and the whole mucous membrane of the lungs. Bronchocele not very unfrequently produces these effects.

'We have been enabled to recognise bronchitis, as hitherto described, although obscured by other diseases, either from the previous history of the case or the absolute state of the symptoms; but it would be an error to conceive that Bronchitis always presents itself with strongly marked features. The truth is, that in many examples it is met with under such circumstances as to be with difficulty, or not at all, distinguished from the co-existing disease.

'Sometimes it is complicated with a multitude of other phenomena. Sometimes its commencement is imperceptible, its progress insidious and obscure, and its termination slow. Sometime scarcely any of the symptoms of bronchitis appear; the patient is visibly affected with some other disease, which seems to prove fatal; and the inflammation of the bronchia is not discovered till after death. Sometimes its abrupt attack, its rapid course, and its combination with inflammation of the lungs, pleura, pericardium, or heart, do not allow us, with any degree of certainty, to fix the character or seat of the affection.'—pp. 181, 2.

On dissection of the severe and rapid cases of bronchitis, the lungs do not collapse, their structure usually appears sound, and the principal evidences of inflammatory action are found in the bronchia. The trachea is often found full of fluid which is sometimes purulent, and at others consists of serous matter, with which coagulable lymph or mucus is generally mixed. The bronchia are for the most part plugged up by purulent matter, or tenacious mucus, or bloody serum, and when an incision is made into the substance of the lungs, a frothy fluid escapes. Sometimes no such fluids are discovered in these parts, although the mucous membrane is inflamed. Sometimes the trachea and bronchia are filled with a substance resembling polypous concretions.

The inflammation of the bronchial membrane exhibits the marks common to inflammations of mucous membrane.

Some variations in these appearances are observed in cases which follow measles, pustular cutaneous diseases, small pox, &c. &c.

Bronchitis cannot always be distinguished with ease or with certainty from pneumonia. The same symptoms are common to them, and they differ from one another principally in some small shades of difference of the same symptoms. Thus in bronchitis, the pallid countenance is more remarkable, the dyspnœa more distressing, the anxiety greater, the expectoration more copious, than in pneumonia. In pneumonia there is generally pain in some part of the chest, in bronchitis only a diffused soreness or straitness across it. The wheezing noise which almost constantly attends some varieties of bronchitis is wanting in pneumonia. The pulse also may assist in forming our diagnosis. They are frequent, but they want the hardness and vibration of the pleuritic pulse. We may sometimes be satisfied by referring to the origin of the disease. If it have succeeded immediately to measles, to the small pox, or any affection of the skin—or to chronic inflammation of the trachea, there is good ground to suspect that the seat of the difficulty is in the mucous membrane of the bronchia.

There is sometimes danger of confounding bronchitis with croup, particularly in those cases where it is combined with inflammation of the trachea. There are no individual symptoms by which the diagnosis may be made in these instances, but the judgment is to be founded upon the whole history and all the circumstances of the case.

Bronchitis may be known from chin cough by the greater degree of fever and dyspnœa attending the former—and by the convulsive fits of coughing which occur in the latter; it is true that this last symptom is not always present, for the disease sometimes never takes on the peculiar form of whooping cough, but proves fatal with only the usual symptoms of bronchial inflammation; and in fact, although the disease may have arisen from contagion, it is to be considered and treated as bronchitis. Chincough, when a fatal disease, is generally made so by terminating in bronchitis, and all the dangerous symptoms which attend the disease may probably be attributed to inflammation of the mucous membrane of the lungs. Whether the proximate cause consist wholly in this inflammation, is a question which cannot at present be decided.

The prognosis in bronchitis varies in the different varieties of the disease. In all of them, it is obvious that many cases will be very mild and terminate favourably, but, on the other hand, in all of them the danger may be very pressing and imminent. We quote the remarks of Dr Hastings on this part of his subject.

'When the breathing is very high and laborious, a degree of coma supervenes, the nails become livid, and the voice is hoarse and indistinct: when the anxiety and sense of oppression are very great, and the pulse weak, quick, and fluttering, the fatal event will almost inevitably occur.

'There are few diseases, however, in which the prognosis is more uncertain than in the second variety of bronchitis. The symptoms are, perhaps, at first very moderate, or even slight; but after a few days, an unexpected exacerbation takes place, and puts an end to the patient's life, when the indications of danger were before very little evident; or when, if the symptoms have been at first severe, a considerable abatement of them has afforded hopes of recovery. There is no symptom on which more dependence can be placed than on the state of the expectoration. Whenever the disease terminates favourably, the expectoration is much more free and copious than in pneumonia; and in proportion as the danger increases, the lungs become more oppressed, the expectoration less free and copious, and the debility greater.

'But even when the event is propitious, if its ultimate results be considered, this must be regarded as a disease of a dangerous character. The mucous membrane having been once attacked, at the period of life in which this variety usually occurs, becomes particularly susceptible of similar seizures, and a chronic disease may be thus established, which gradually undermining the constitution, may lay the foundation of hydrothorax. The disease also sometimes degenerates into a spurious consumption, which in many instances proves fatal; and after death the mucous membrane of the bronchia is often found ulcerated.

'In the third variety, when bronchitis attacks the strong and plethoric, the danger is seldom equivocal. No inflammatory affection of the pulmonary organs is more frequently fatal than this. There is much to dread, even if vigorous measures be employed at an early period. The sense of constriction across the chest; the hurried, anxious, and laborious breathing; the cough without much expectoration, the dry and hot skin, the foul tongue, the high coloured urine, and the quick pulse, indicate severe inflammation of the mucous membrane.

'The prognosis is more favourable if the breathing be relieved, and the cough be attended with a free expectoration. But it is much worse if we observe the slightest purple tinge on the cheeks, or if the expectoration diminish, and the breathing become more difficult; or, finally, if the eyes be rather prominent, and the patient alternately restless and lethargic.

'The case is altogether hopeless when the pulse becomes quite feeble and frequent; or when partial sweats break out, and the expectoration ceases.

'In young children, the prognosis is more unfavourable than at any other age.

'Bronchitis arising from cutaneous diseases is more dangerous than that proceeding from cold.' pp. 205–207.

The latter part of this chapter, relating to the treatment of the disease, is less satisfactory than that of which we have already given an account. The author speaks of the remedies to be employed, and the mode of their application, in a somewhat vague and loose manner. We do not mean, that we disagree with him in his general views of the mode of treatment; as far as he goes, there is nothing to be condemned. The fault is rather one of omission. He gives us only a superficial and insufficient sketch, and not a full detail. We proceed, however, with our analysis.

'From the preceding history of this disease, it appears that a variety of causes may give rise to bronchitis. The treatment will be also found to vary, in some particulars, with the cause. But the causes being all such as bring on inflammation of the mucous membrane of the lungs, the fundamental indication is to remove the inflammatory action, so as to prevent those changes which will otherwise occur in the structure of this delicate membrane.

'The following is a concise view of the means we have recourse to for removing these inflammatory affections. To moderate the excitement of the sanguiferous system—general bloodletting, acidulated and mucilaginous drinks, and abstinence from all stimulating food. To promote expectoration and perspiration—antimonial and saline medicines. To direct the fluids towards the surface, and relieve the congestion of the debilitated capillaries—local bloodletting, blisters, and rubefacients.' pp. 207, 208.

Of these means, bloodletting is hardly ever required in the first variety; in the second, it is often called for, but should be employed with caution; in the third, it is the principal remedy to be relied on, and should be resorted to promptly, freely, and, if necessary, repeatedly; in the fourth, although children do not bear bleeding well, it is often important, and, in the other varieties, the propriety of its employment must be decided on, upon the same general principles that govern us in other cases.

Emetic medicines are remedies of considerable importance in bronchitis, both in full and in nauseating doses. Vomiting is particularly recommended in the second and fourth, and nauseating in all the varieties.

> 'In each of the above states, the vomiting, if necessary, may be repeated, and in some cases a frequent repetition of emetics is called for. The aqueous solution of tartarized antimony is in general, perhaps, the best remedy for producing these effects, although in young children it is not so safe as ipecacuanha, which, in them, should be consequently preferred. Independently of the action of the former as an emetic, it seldom fails to excite diaphoresis, which, if general, and not too profuse, nor brought out by heating measures, is usually beneficial. But the good effects of antimonials are not confined to those states in which we wish to produce vomiting. In every variety of acute bronchitis, when there is much fever present, the greatest advantage is derived from the steady use of antimonials. They are indeed the most valuable of all medicines, for they not only, by exciting nausea and opening the pores of the skin, considerably lessen the febrile excitement, but, by their action on the exhalent vessels of the lungs, they promote expectoration, and thus lessen the inflammation of the mucous membrane. They may be given in combination with saline draughts and nitrate of potass, which should be always employed when there is much fever.' pp. 212, 213.

With regard to the use of expectorants, no very important or decided directions are given, except so far as emetic articles and mucilaginous remedies are expectorant. Of what is said of cathartics the same remark may be made, except that their use in that variety where bronchitis is combined with abdominal or hepatic disease, is strongly recommended.

Mercurials are not of service except under the same circumstances, and where bronchitis is combined with inflammation of the trachea, producing symptoms resembling croup.

Opium requires great care and delicacy in its administration in the several varieties of this disease. As long as there is much fever it is prejudicial, but when that declines it may be of service by allaying the cough and calming the patient. In the second variety, when the secretion is copious, opium by quieting the cough and interrupting the expectoration, may prove fatal. In combination with calomel, however, it may be administered with benefit in the earlier stages of the disease, and is found to diminish the cough, promote the expectoration, and regulate the secretions throughout the system.

Diuretics have been sometimes advised in the second variety. In the state of collapse into which the patient falls at the termination of the acute stage, it is recommended to endeavour to support the strength by the usual routine. Ammonia is particularly mentioned as adapted for this purpose.

Local bloodletting and blistering are to be made use of in the same general way, as in other acute inflammatory diseases. Where general bleeding is alone insufficient to allay the inflammation, or when circumstances forbid its employment, local bleeding by leeches or cupping is a most important auxiliary; and after excitement is removed or alleviated by bleeding, blisters should be immediately and extensively applied, and their influence kept up as long as the continuance of the disease renders them necessary. The warm bath, warm fomentations, cataplasms, &c. are all of occasional application.

The disease is generally followed by a great debility, which is to be treated upon general principles.

This chapter is concluded by a number of interesting cases illustrating the several varieties of the disease.

Chapter IV. embraces the consideration of chronic bronchitis. This inflammation 'is so often connected with other affections, and so frequently gives rise to extensive mischief in the thoracic viscera, that the consideration of this disease will necessarily lead us to discuss the nature of some other affections which are occasionally combined with it.' p. 264.

1. 'If the patient be advanced in life, the inflammation of the bronchial membrane, when it has continued some time, frequently assumes the character of chronic cough, which may be considered as the first variety of bronchitis chronica.'

The cough generally attacks during and continues through the winter months. The mucous membrane is peculiarly sensible to changes of temperature, however slight. The respiration is uneasy and often attended by a wheezing noise. The cough is peculiarly urgent in the morning on awaking, and continues till the lungs are unloaded of the mucus accumulated during the night; but during the day it is usually quiet, except upon exertion or after a meal. The expectoration is copious and varies from a thin, frothy, to a tenacious pus-like fluid. There is seldom pain in the chest, and the pulse, though generally quicker than natural, are seldom hard. Some symptoms indicative of disorder of the digestive organs are generally present, such as furred tongue, loss of appetite, weight and pain in the epigastrium, and irregular bowels; but the local symptoms proceeding from bronchial inflammation, sometimes exist without any constitutional affection. These symptoms sometimes end in hydrothorax, but more commonly on the return of warm weather, the patient is restored to health.

2. Chronic bronchitis, in its progress, sometimes resembles tubercular consumption. If the disease have arisen in the first instance from cold, the symptoms of catarrh are gradually merged in those of phthisis. The expectoration particularly assumes all that variety of appearance, which is seen in that disease. The respiration, pulse, hectic fever, emaciation, countenance, &c. all proceed nearly as in the regular cases; and it is in fact only from the origin and early symptoms, that the real difference can be detected. In the first stage, judicious treatment may contribute essentially to a favourable result, and even under very unpromising circumstances, a recovery is not to be wholly despaired of.

3. The third variety includes those cases which follow upon very severe attacks of the acute species of this disorder. The most violent symptoms are mitigated, the patient gains some strength, but the expectoration is increased, the sputa are composed of mucus in different states, and sometimes mixed with blood, and the pulse become weaker and quicker, with increased emaciation, fever, sweats and muscular debility. In this untoward state of things, a change sometimes takes place for the better, and slowly the disease goes off, and the patient very gradually gets well. But without this change, the symptoms, all of them, continue on the increase, and finally prove fatal, although there is no period at which recovery may not ensue.

4. Under this division are arranged the cases of chronic bronchitis following the acute bronchitis, which proceeds from cutaneous disease, and also those cases of chronic bronchitis produced directly by the disappearance of eruptions. The symptoms and history of these cases does not differ essentially from the other varieties of bronchitis.

5. 'Chronic bronchitis is sometimes the result of irritating substances acting on the mucous membrane.' These substances may be in the form of gas or of some fine dust. Cases of this kind were observed in stone cutters, by Diemerbrook, who found the stone dust filling the minute air vessels of the lungs. The preparers of yellow leather, and the workmen upon some parts of the manufacture of China ware, are also liable to attacks of this kind, as has been observed by Dr Hastings in the town where he resides. These cases have some circumstances in their history peculiar to themselves. Dyspnœa is the primary symptom which is frequently followed by hemoptysis, and although this last symptom may be alleviated by the usual

means, yet a long succession of untoward occurrences follow, and sometimes induce a fatal termination.

6. Chronic bronchitis sometimes is connected with diseases of the abdominal viscera. Of these, disease of the liver is that to which it most frequently owes its origin. In such cases, at their commencement, there are no circumstances which indicate particularly any tendency to a pulmonary affection, but this tendency is gradually developed as the complaint advances, till the bronchial membrane becomes completely diseased, and the patient sinks with purulent expectoration, hectic fever, and emaciation.

Other diseases of the abdominal viscera are also sometimes combined with those of the lungs, but more particularly with bronchial inflammation. Where bronchial inflammation proceeds from ulceration of the stomach, the patient is generally much emaciated before pulmonic symptoms occur. The subjects of this disease have generally passed the middle of life, and have suffered for some time from symptoms of gastric disease, and the affection of the lungs comes on very insidiously.

> 'A dry cough first attracts attention, which is sometimes accompanied with wheezing respiration and some difficulty of breathing. A considerable sense of oppression is also felt immediately under the sternum; but no pain is excited in the chest by a full inspiration. At the same time that the pulmonic attack occurs, the disease of the stomach often appears somewhat relieved. The vomiting does not return so frequently, and the desire for food is rather increased than diminished. The pulse becomes quicker and harder, and the heat of the surface greater.' p. 279.

As the disease advances, its symptoms vary less from those which ordinarily accompany bronchial inflammation. The sputa which are at first mucous become entirely purulent, and the emaciation then goes on more rapidly than before. Hectic fever supervenes, and a fatal termination follows it very soon.

Chronic bronchitis also proceeds from long continued disease of the mesenteric glands, and of the peritoneum; but the pulmonary cases which accompany or follow these abdominal affections more frequently partake of the character of tubercular phthisis.

On dissection the lungs in chronic bronchitis are found filled with a frothy fluid, which escapes when they are cut into. The mucous membrane exhibits various appearances. Its capillaries are always dilated, and sometimes very fully injected with blood—sometimes red, sometimes purple—it is usually thickened, and often pulpy. Not uncommonly it is ulcerated, more particularly when the case has arisen from mechanical irritation. The bronchia and air cells are almost always filled with a purulent, mucous or serous fluid, sometimes with an intermixture of blood.

The diseased appearances are not always confined to the mucous membrane; but the other textures of the lungs, the heart and its coverings, and the contents of the abdomen frequently present the various morbid appearances to which they are liable, but none which appear to be peculiarly the consequences of this disease.

The diagnosis which requires most attention, is that between chronic bronchitis and tubercular phthisis. This is sometimes very obscure from the close resemblance of the symptoms in the later stages, and in fact the two diseases are frequently complicated.

> ‘ Early in the disease, the absence of pain during inspiration, the capability of resting on either side in bed, (when there is no abdominal disease,) the wheezing noise in respiration, the leaden colour of the lips, and the pallidity of the countenance, the appearance of the sputa, consisting almost entirely of mucus occasionally streaked with blood, are symptoms sufficiently well marked to distinguish chronic inflammation of the bronchia from tubercular phthisis.’ p. 290.

In the more advanced stages the diagnosis becomes more obscure, and is less important. It is to be founded upon a careful inquiry into the general history of the case, rather than any particular set of symptoms. The expectoration is more copious in bronchitis, the cough more full, the hectic less regular, the sweats less universal, the emaciation not so excessive. Its origin is generally different.

The prognosis varies much according to the nature of the case. Where it has a catarrhal origin, is not attended by a decided hectic and emaciation, it is frequently favourable, although the expectoration should appear purulent, and the cough and dyspnœa be urgent. Where the disease has begun with acute bronchitis, it is more likely to terminate well, than where the attack has been more slow and insidious. The danger is great where the expectoration is very purulent, and the degree of danger lessens as the proportion of pus lessens. Where the disease is produced by other diseases, as of the liver or abdominal viscera, the danger depends principally upon the severity of the original complaint, and is to be measured accordingly.

The primary and principal object of the treatment in chronic bronchitis must of course be, to remove that inflammation of the mucous membrane in which it consists. But the means adapted for this purpose will vary according to the constitution of the patient, and the varieties in the causes and symptoms of the case.

Bloodletting, although a powerful remedy in inflammatory diseases generally, is to be employed with great caution in cases of chronic bronchitis. Its use is to be determined by the age, strength, habits and stage of disease in the patient; and where he is young, of a good constitution, with a full and hard pulse, venesection may be performed; but in general we are to confine ourselves to local bleeding, by cupping or leeches, which is of much advantage and may be frequently repeated. It sometimes happens, where the disease has been of long standing, and the subject has become in some measure habituated to it, that an occasional and pretty severe increase of the symptoms will arise, the breathing becoming very laborious and the face and hands purple, indicating great obstruction in the circulation of the lungs. In such a case, one large venesection will commonly remove the urgent symptoms.

Vesications and rubefacients, in the opinion of Dr Hastings, are not to be applied to the chest until after the circulation has been weakened, and the inflammation somewhat reduced by antiphlogistic measures, such as general and local bloodletting. It is dangerous, in his opinion, to employ them early when the inflammatory symptoms are strongly marked. We suspect, however, that there is no good foundation for this caution. He admits, that when this stage has past, they may be of great service, and when the disease is obstinate, recommends also the insertion of setons and the formation of caustic issues.

Of the use of emetics as a measure of relief in the tussis senilis, or that variety of chronic bronchitis which affects the aged, he speaks favourably, but does not apprehend that they have much effect in forwarding a radical cure. In other forms of the disease he does not encourage their use. In this particular also we are disposed to differ; so far as our limited observation has enabled us to judge, we should incline to a favourable estimate of the efficacy of small and frequently repeated emetics in this disease.

Digitalis and squills are found occasionally useful—the former, where there is tendency to dropsy; the latter, where the disease assumes the character of chronic cough, particularly in the old and phlegmatic. Tincture of meadow saffron is recommended in the following terms.

'The tincture of meadow saffron appears a very promising remedy in chronic bronchitis, and certainly possesses very remarkable powers. It allays the cough, promotes the flow of urine, and keeps up a regular alvine discharge. It can be given much more generally than squills, because it does not produce that feverishness which results from the use of the latter remedy, and can therefore be employed where there is considerable fever; for, from the power it possesses over the secretions, this medicine tends to relieve fever. The dose generally prescribed by the author is twenty drops three times a day. In some cases this must be diminished on account of its action on the bowels, severe diarrhœa being occasionally brought on by its use. Sometimes the patient is not affected by twenty drops: if this should happen, the dose may be gradually increased, until the bowels, the skin, or the kidneys, are acted upon. Patients rarely bear more than thirty drops three times a day without being a good deal purged, which is not to be desired in prolonged cases of this disease. If there be much quickness of the pulse, the author generally combines eight or ten drops of the tincture of foxglove with that of the meadow saffron; from which combination the cough is often relieved, and the quickness of the pulse is diminished.' p. 303, 304.

Balsam copaiva, so warmly recommended by Drs Duncan and Armstrong, Dr Hastings has not found so efficacious as they have represented. A combination of cicuta and ipecacuanha, he has found beneficial in allaying cough, and producing a healthy expectoration. Cinchona has been sometimes of great service, particularly in those instances that succeed to acute bronchitis, where the debility brought on by the acute attack is very considerable.

Mercury, when administered with great caution, is frequently of great service in chronic bronchitis. It is particularly required in cases arising from hepatic affection, and may be carried to the extent of a slight ptyalism. The quantity of mercury required may be lessened, by the combination with it, of large doses of the extract of dandelion. Mercury is also of service in small doses in cases which succeed to measles, when the shrillness of the voice indicates considerable affection of the mucous membrane lining the trachea.

Opium cautiously used, so as not to prevent expectoration, but only moderate the cough, is of service as a palliative. Pushed to any great extent it becomes injurious, and the lactucarium has been strongly recommended as a substitute.

Of the application of remedies directly to the parts affected,* our author has these remarks:—

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* The application of medicinal articles, such as cinchona, myrrh, sulphate of sinc, &c. &c. in the state of an impalpable powder, to the internal membrane of the lungs by means of a newly invented inhaler, has lately been recommended in several cities of the United States by Dr Middleton, a very benevolent and enthusiastic physician, who has delivered in Boston a lecture on the subject. His project is defended with some ingenuity and a great deal of zeal, and he is very san-

'The inhalation of different articles under the form of vapour has thus been a favourite practice with some writers on pulmonary consumption. If there be any affections of the lungs in which this practice is beneficial, it appears to be those in which the mucous membrane is the principal seat of the disease; because it is in them only that the remedies can be topically applied. The vapour of tar is the only one of them that the author has ever made extensive trial of. This came supported by such apparently strong evidence as a cure of pulmonary consumption, that almost every medical man felt inclined to give it a fair chance in this hitherto incurable malady. Not one instance has occurred in the author's practice of even temporary relief in tubercular consumption by the inhalation of this vapour: indeed, it has appeared in some examples of this kind to cause a very tiresome irritation in the glottis, which has increased the cough. This has not been so much the case in chronic bronchitis; in this disease it seems to assist other remedies in restoring the mucous membrane to its healthy secretion; and in some very obstinate cases the inhalation alone has appeared to remove the diseased action in the mucous membrane of the lungs. In other instances the inflammation has been aggravated and rendered more acute by it. From the author's experience of this remedy, it appears that when the habit of body is irritable, and the inflammation at all active, the symptoms are increased by its use; but if the disease have been long in a chronic state, and the habit of body be not irritable, relief follows its application.' pp. 308, 309.

In chronic bronchitis, as in all other chronic diseases, regimen is of the utmost importance. The diet should be regulated by the stage of the disease. It should never be stimulating, and, on the other hand, not spare or refrigerant. In the early stages, the patient should be principally confined to milk and vegetables; in the later, a more nutritious diet may be allowed. Good air, and a change of air, are of great service; and, in many, a removal to a warm and steady climate is called for. The clothing should vary, so as to keep up a moderate and regular, but not oppressive warmth. A regular state of bowels must also be maintained, but purging is not often called for. Of the different modes of exercise, those are to be chosen which the situation, feelings, and strength of the patient will admit. Walking is often too fatiguing, and hurries respiration; and, in such cases, carriage or horse exercise may be substituted. When the patient is confined to the house, the swing may be employed.

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guine of its success. Experience, however, is the only test of the value of a remedy; and the history and fate of several celebrated remedies warn us to be exceedingly cautious in admitting the pretensions of new ones, without careful and long continued observation by a variety of practitioners.

Chapter V. treats of Dropsy, as dependent on inflammation of the mucous membrane lining the bronchia.' This, Dr Hastings believes, to be of more frequent occurrence than is generally believed, and he refers to cases of this nature recorded by Drs Blackall and Crampton. In this variety of dropsy, the breathing is very laborious, and the horizontal posture produces a feeling of suffocation; the respiration is wheezing, and the voice croaking. There is stricture of the chest, lividity of the face and lips, prominence of the eyes, and anxiety of the whole countenance. The cough, which is harassing, is usually attended with a copious expectoration of blood, pus and mucus, but is sometimes dry.

The action of the heart is disturbed, there is uneasiness in the seat of it, and it is affected with violent palpitations which are felt all over the chest, and even in the epigastrium. It beats often irregularly, and the sensation given by its pulsation is unnatural, and resembles an undulation rather than a contraction. Frequently there is a combination of disease in the abdominal viscera.

The pulse present every variety. The tongue and mouth are clammy, and the patient complains of urgent thirst. The skin is dry and often rough during the day, but in the night perspirations break out. The bowels are often irregular, and the feces unnatural. The urine scanty, sometimes high coloured, with a copious sediment; at other times limpid and without sediment, and sometimes coagulable by heat or by the stronger acids.

'In addition to these symptoms, the head, trunk and extremities are swollen, and pit on pressure being made.'

The most favourable course which this disease can take, is for the pulmonary symptoms to subside or become alleviated, upon which the secondary dropsical affection is relieved, and finally goes off. A less favourable termination takes place when the dropsical symptoms subside, whilst the pulmonary affection continues in a form strongly resembling phthisis pulmonalis, and carries off the patient with night sweats, emaciation and excessive expectoration.

In the worst cases all the bad symptoms go on increasing, both dropsical and pulmonary, and death finally ensues by suffocation.

On dissection, the morbid appearances in the lungs, are similar to those observed in bronchitis; there is generally a considerable quantity of fluid in the sacs of the pleura and in the pericardium. The heart is frequently affected with disease.

There is often fluid in the cavity of the peritoneum and in the cellular membrane throughout the body, and the abdominal viscera are frequently diseased.

The indications of treatment are two—'to remove the inflammation of the mucous membrane of the lungs and the congestion of the pulmonic tissue, and to excite a more free discharge of urine.' Bleeding is the remedy which first presents itself to answer the first indication. It is the opinion of Dr Blackall, that the coagulability of the urine by heat or the acids, forms the best guide in the use of the lancet. But Dr Crampton, and with him our author, is convinced of the impossibility of directing the evacuations by the state of the urine.

'In the variety we are considering, in which so much mischief is done to viscera of the first importance, we should rather be directed in the treatment by the state of the functions of those organs, and general inflammatory symptoms, than depend on the signs shown by any one excretion. So decided is Dr Crampton on this subject, that, in one part of the Report before alluded to, he observes: "In either general or partial dropsy the preceding cases warrant us in stating, that whenever the organs of respiration appear to labour, if the strength is not much impaired, and if the disease is recent, it will be safe to practise general bloodletting: still more so, if, in addition, there are symptoms which denote inflammation of any texture in the cavity of the thorax. In some of the cases a single venesection appeared to arrest the progress of a recent dropsical disease; in others a repetition of that practice appeared necessary to ensure success. In such a complication other remedies appeared to be thrown away; diuretics would not act, and purgatives did not afford any relief till after venesection had been practised.'* p. 395.

With similar views, Dr Hastings has been in the habit of employing bloodletting in the variety of dropsy under consideration. It is necessary, however, to do it with great caution, and where a repetition seems called for in debilitated subjects, to substitute local bleeding for it. In many cases, local bleeding is the only way in which the loss of blood is admissible, and by means of cupping and leeches the dyspnœa and venous congestion are frequently relieved, without once having recourse to venesection. But where dependence is placed upon the local abstraction of blood, it becomes necessary to repeat it according to the urgency of the symptoms, the degree of relief obtained, and the effect of other remedies administered at the same time.

Blisters should succeed to venesection or local bloodletting, and should be applied on the anterior part of the chest. They relieve the dyspnœa and cough, but Dr Hastings objects to their application to the lower extremities for the purpose of renewing the effused fluids, since this effect, if produced, is only temporary, and there is great danger that they will be followed by erisipelatous inflammation and sloughing.

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* Clinical Reports, pp. 259, 260.

Purgatives, which are so highly recommended in dropsy proceeding from other causes, are not well adapted to that species which proceeds from an effection of the lungs.

> 'In the dropsical affection we are considering, the drastic purgatives seem to be inadmissible; for it is open to every man's observation, that in inflammation of the thoracic viscera, severe purging, so far from lessening the excitement, appears sometimes to increase it. There is only one period of this dropsical affection at which their use seems beneficial. This period is towards the close of the disease, when the dropsical swellings are increasing fast, and suffocation is impending. Under these circumstances, drastic purgatives, by diminishing the effusion, may give a temporary relief to the symptoms.' pp. 399, 400.

He recommends the use of purgative articles of the saline class, and these, principally, as laxatives.

In this, as in all other forms of dropsy, diuretics have been much employed; and, as usual, have been found extremely uncertain and unequal in their operation. Venesection sometimes occasions a copious flow of urine, and removes the dropsical swelling, but this effect is temporary, unless followed by other remedies which act upon the kidneys. Dr Hastings recommends for this purpose, squills, foxglove, meadow saffron and crystals of tartar.

With regard to the use of these articles, he recites, first, the contradictory opinions of Drs Blackall and Crampton, and states, as the result of his own experience, that, after the inflammatory state has subsided, a combination of squills, digitalis, and sometimes blue pill, excites the kidneys to action, and rapidly relieves the congestion and difficulty of breathing. A favourable opinion is expressed of the meadow saffron and of the supertartrate of potass.

We have already expressed a favourable opinion of this work, and no practitioner can read it without advantage. Not, perhaps, that it will present to him very many new facts, but it will suggest some new points in which to view the knowledge of which he is already possessed. It furnishes him with a method, according to which, he will find it useful to arrange the knowledge he acquires of these diseases and their treatment.

SELECTIONS.

Official Report on the Fever which appeared on board his Majesty's Ship Bann, on the Coast of Africa, and amongst the Detachment of Royal Marines, forming the Garrison of the Island of Ascension, in the Year 1823. By William Burnett, M.D., one of the Commissioners of the Medical Department of his Majesty's Navy, Physician in Ordinary to his Royal Highness the Duke of Clarence, and Honarary Fellow of the Imperial Medico-Chirurgical Academy of St Petersburgh. London. 1824.

[From the Edinburgh Medical and Surgical Journal.]

THIS slender volume is valuable on account of the authenticity of the statements it contains, and the temperate judgment of the author. One fact recorded in it is particularly valuable, because the circumstances connected with it can so rarely occur, and are exactly those which seem to constitute, if any circumstances can constitute, an *experimentum crucis* as to the supposed contagious nature of any disease.

The Island of Ascension was uninhabited until 1815, when Bonaparte was sent to St Helena, and it became a matter of precaution to occupy Ascension with a few British troops. Till this time it was only visited during the turtle season, for the sake of that fishery, so that there existed no source of disease as derived from its being the habitation of man, or domestic animals. After it was occupied, the troops were liable to all the endemic causes of disease, arising from the soil, and climate, and season of the year. As might be expected, the amount of disease derived from these sources would vary somewhat in different years; but an unprecedented diffusion of disease, and increase of mortality, occurring in such a situation immediately after the arrival of a vessel with a sick crew, give the strongest presumption that the arrival of the vessel, and the increased sickness, were connected as cause and effect; or, in other words, that a contagious disease had been imported. Such appears to have taken place after the arrival of the Bann, a sick ship from Sierra Leone. During the seven preceding years 12 died, and of these only 2 from fever; but in two months after the arrival of the Bann, there died, of a fever having the same character as that which prevailed in that vessel, 15 of the garrison, besides 2 boys and 4 women.

We quote the account of the medical topography of this singularly situated spot of land in the middle of the ocean.

'The island of Ascension, in circumference about twenty miles, is situated in the ocean, in lat. 08° 56′ south, longitude 15° 27′ west, at the distance of many leagues from any other land, with a trade wind from the south S. E. constantly blowing over it; and being of volcanic origin, nearly the whole of its surface, excepting the Green Mountain, has a corresponding appearance, being (as in the neighbourhood of the garrison) of a dry, arid, and barren nature, with volcanic stones overlaying a quantity of mouldering pumace. On some of the more elevated spots, it is composed of ashes which extend to a considerable depth; still there are a few places where a fine light mould is met with about half a foot below the surface.

'At this island, in the month of April, the thermometer in the shade stands, from noon till nearly two p. m. at from 85° to 88°, generally 87°; and as the evening advances, gradually falls to between 76° and 80°. About two o'clock in the morning, a further reduction of one or two degrees takes place, which continues till five a. m. when the heat progressively advances till mid-day. In May the heat generally declines a little, and is commonly from 84° to 85° in the day, and from 75° to 76° at other times, which is probably owing to showers of rain, which prevail at this season.

'With respect to the heat of the summer in general, a sensible increase takes place in December, the thermometer being at noon towards the end of the month, at 86°; in January it advances about two degrees; and in February, and till the middle of March, it is often found at noon to have attained to 90° or 91°, sometimes 93°, and at these times the dews are heavy, and are seen in the morning. It appears, that in general the rains are not of long duration, though commonly heavy; pools of water are sometimes formed, but disappear in the course of a few hours: these rains, however, occurring for the most part at the turtle season, appear to have produced occasionally attacks of fever and dysentery, and it was at this period the Bann arrived.

'The posts occupied by the detachment, which consisted of thirty-five officers and men, were three in number, namely, the principal one or barrack, which is situated low, and surrounded by high grounds, about one hundred yards from the sea, is formed by several detached houses nine or ten feet square, and a large barrack-room, about forty feet long and fifteen broad: in this last there were about sixteen people residing. The several buildings are arranged in the form of a square, the smaller ones being occupied for stores, or by families, and the quarters of the officers are situated on the elevated ground to the south-east of the square, about twelve feet above it, and there the temperature was about two degrees lower.

'In the front of this barrack, and about one hundred yards from the sea, a well was dug, by the first garrison, about fifteen feet deep, being three feet below the level of the sea, in the hope of obtaining fresh water by its percolation through the sand; it was found, however, to be perfectly unchanged, rising and falling with the tide, on the reflux of which the well was left nearly dry, and the water remaining in it foul and offensive.

'The post called Springs is situated at the distance of four miles and a half in a S. E. direction from the barracks, being at an elevation of about nine hundred feet above them, and, with regard to the soil, corresponds, on its surface, in many places, with the neighbourhood of the barracks. There, however, the thermometer is commonly two degrees lower, and the relative variation is still greater in the twenty-four hours, being often in a ratio of 9°, 10°, and 12°. In some places the ground is covered with a superficial layer of earth, with here and there spots favouring vegetation. The same kind of volcanic ashes are also met with, but they are more compactly united; and the people lived in caves, hollowed out of this substance, in the sides of the mountain.

'The post on the Green Mountain, being about 2500 feet above the level of the sea, is situated immediately above Springs, at the distance of nearly a mile; and, on ascending thereto, the ground is seen completely to change its character. All trace of volcanic matter is lost; and it presents to the view a mass of calcareous rocks, covered to a great extent with a thin surface of earthy soil, which throughout the year is favourable to vegetation.

'This post is for days enveloped in clouds, occasioning catarrh and rheumatism; but the soil remains dry. The heat is from four to five degrees lower in the day than at the garrison, and at night from eight to nine. In July and August, the thermometer often stands at 65° in the morning, and the maximum is 80°. In February and March, the hottest season, the greatest height it attains is 85°." pp. 6–9.

The following is the abstract of the state of health from 7th March 1816 to 7th May 1823, or during seven years.

Disease.	Put on the sick List.	Discharged to Duty.	Invalided.	Died.
Continued Fever - -	10	9	—	1
Bilious Remittent Fever -	11	10	—	1
Fever - - - - -	2	2	—	—
Dysentery - - - -	44	34	3	7
Diarrhœa - - - -	3	3	—	—
Cholera - - - -	3	3	—	—
Pneumonia - - - -	6	5	1	—
Chronic Hepatitis - -	24	13	10	1
Rheumatism - - -	6	4	2	—
Apoplexy - - - -	1	—	—	1
Epilepsy - - - -	1	—	1	—
Paralysis - - - -	1	1	—	—
Ophthalmia - - -	1	1	—	—
Asthma - - - -	1	—	—	1
Vertigo - - - -	1	—	1	—
Inguinal Hernia - - -	1	1	—	—
Fistula Lachrymalis - -	1	1	—	—
Coup de Soleil - - -	1	1	—	—
Pulmonic Inflammation -	2	2	—	—
Scurvy - - - -	3	3	—	—
Fracture - - - -	3	2	—	—
Wounds and Accidents - -	3	2	1	—
Other Complaints - -	3	3	—	—
	132	100	19	12

On the 27th of March 1823, the Bann sailed, with a sickly crew, from Sierra Leone, and arrived at Ascension on the 20th April. At the time of the Bann's arrival, the inhabitants, consisting of a garrison of 35 marines, officers and men, with some women and children, were in good health. We have now to observe what followed.

'The report of Mr Thompson, the medical officer of the garrison, states, that the appearance of the fever amongst them is dated eighteen days after the arrival of the Bann, viz. on the 11th of May; but he adds, however, that one of the people was attacked as early as the 28th of April with symptoms of fever, which he then thought might be a mild case of the Bann's, which was scarcely about two days after the landing of the sick. The man thus attacked was a convalescent on the 7th of May. On the 11th of May, a boy (son of one of the sergeants) was violently attacked, and ultimately died; but it is neither known nor believed that he had any nearer communication with the sick of the Bann than passing daily at no great distance from the tents to feed his father's poultry, and he was never on board that ship. Up to this time the restrictions on the intercourse between the ship herself and the garrison had not been much attended to, and certainly not at all as regards the communication of the garrison with each other; several things, such as side-boards, &c. had been landed from the Bann, which had been brought by her from Sierra Leone, and some of the officers and men had gone on board that ship (after the sick were landed,) to the sale of the effects of some deceased person. From this time, however, every proper precaution was taken for preventing the extension of the disease to the outposts; notwithstanding which, six men, two women, and seven children, were taken ill at Springs, but fortunately none at the Green Mountain, though one of the men belonging to that post had been on board the Bann, at the sale before mentioned. Some days after the arrival of the Bann, Captain Phillips took up his residence at Springs; but, though he was much indisposed with a low fever, both the surgeon of the Bann and the assistant of the garrison are of opinion, that he did not suffer from the prevailing fever.

'About this time, the fever in the Bann had nearly ceased; but it went on, daily attacking some of the garrison; and it appears, by the official report, that twenty-eight were taken ill, of which number fifteen died, and thirteen recovered. Independently of the officers and marines above stated, two boys were attacked, both of whom died; and of six women four died; seven children likewise suffered attacks of this fever, all of whom recovered; but, unfortunately, three younger children, the eldest being only four months old, died from want of their usual sustenance, after the demise of their mothers.' pp. 13–15.

The disease ceased in the island about the 16th June.

The progress of the disease on board of the Bann, is described in the following extracts.

'His Majesty's sloop Bann anchored off Free Town, Sierra Leone, on the 11th of January 1823, and continued there until the 25th of March, her ship's company on board being in excellent health. On this day, one case of fever, having severe inflammatory symptoms, was put on the sick list, and the patient died on the 30th, the fifth day of his illness. On the 26th, the master and two seamen were attacked in the same manner, and recovered. On the 27th, the Bann sailed from Sierra Leone.'—'Between this time and the 31st of March, three more cases occurred on board the Bann. On the 31st, one case of the same kind was added to the list; and on the

3d of April, four more of her people were seized with the same complaint.

'From this time the sick list rapidly increased, and, according to the account of Captain Phillips, beginning forward in the ship, came gradually to the after part, till nearly all the officers and men were attacked; indeed, when it ceased, at Ascension, only about sixteen had escaped of the officers and ship's company. The total number attacked was ninety nine, of whom thirty-four died, fifteen of them before the Bann reached Ascension.'—'The ship was ordered to St Thomas's, but from the unhealthy state of the crew, and the bad weather, it was deemed advisable to procced directly to the Island of Ascension; and on her arrival at that place, on the 25th of April, tents were immediately erected on shore at the distance of nearly five hundred yards from the garrison, with which all intercourse was interdicted, and the whole of the sick, amounting to forty-five, labouring under the prevailing fever, were landed, and placed in the tents provided for them.' pp. 3-5.

From these facts Dr Burnett draws a conclusion, in which we cannot but concur.

'There cannot, however, I think, be a doubt of its having possessed contagious properties afterwards, and of its having been introduced into the Island of Ascension by the Bann; still, even here, difficulties occur in accounting for many circumstances, particularly the attack of two posts, and the exemption of a third, viz. the Green Mountain (where there were six soldiers, one woman, and two children,) when the communication was open for eighteen days, and one of these persons had even been on board the Bann for some time. I have, however, formed my own opinion, from a consideration of all the circumstances of the case; and I have narrated the whole of the facts connected with it, as far as they have come to my knowledge, with the utmost impartiality, without suppressing or distorting one of them; and I must, after they have read the remainder of this Report, leave others to form their own.' pp. 25, 26.

There are some other interesting facts and statements in this volume, tending to support our author's opinion, that the yellow fever, as it is called, is not *ab origine* contagious, but may become so under particular circumstances; but we decline entering upon them, as we wish to present our readers with the preceding observation, alone and distinct from every other, which might give opportunity for that special pleading which rather displays the ingenuity of the partisan, than advances the progress of knowledge.

INTELLIGENCE.

MASSACHUSETTS MEDICAL SOCIETY.

At the annual meeting of the Massachusetts Medical Society holden in Boston, June 1st, 1825, the following gentlemen were elected counsellors for the ensuing year, to wit:—

Suffolk.—Drs Townsend, Dexter, Spooner, Bullard, Coffin, Dixwell, Jackson, Shurtleff, Warren, Gorham, Randall, Shattuck, Brown, Channing, Bigelow, G. Hayward, Hale.

Essex.—Drs Holyoke, Oliver, Treadwell, Prescott, jun. Gardner, Hazeltine, Bradstreet, Cleaveland, Kittredge.

Middlesex.—Drs Hind, Bancroft, Thomas, Heywood, Wyman, Chaplin, Bucklin, Walton, Thompson, How.

Worcester.—Drs Green, Haskell, Thurber, Batchelder, Holmes, Homans.

Hampshire.—Drs E. Dwight, Smith, Hooker, Flint, Lathrop, Stone, Williams.

Berkshire.—Drs Collins, Rogers, Childs, Tyler, Worthington, Bartlett.

Norfolk.—Drs Holbrook, Miller, Bartlett, Thaxter, Bugbee, Stimpson.

Plymouth.—Drs Orr, Otis, Hayward.

Bristol and Barnstable.—Drs Billings, Read, Johnson, Batchelder.

Among the votes passed at the meeting, were the following:—

Voted, To explain the 1st rule of section 2, chapter IV. of the By-Laws, relating to the knowledge of candidates for licenses, of the *Latin language*, in the following way:—'It is understood that candidates must be able to translate the select orations of Cicero, the Æneid of Virgil, or the medical writings of Celsus, and the formulæ of the Pharmacopœia of the United States.'

Voted, To explain the same rule in relation to the knowledge of *Geometry*, and *Experimental Philosophy*, by the following words, viz.:

'That the candidate must have a knowledge of Euclid's, Playfair's, or Légendre's Elements of Geometry, and Bryan's Conversations on Experimental Philosophy, or Enfield's Elements of Natural Philosophy.'

At a stated meeting of the Counsellors of the Massachusetts Medical Society holden on June 2d, 1825, the following gentlemen were chosen officers of the Society for the ensuing year:—

James Jackson, M.D. *President.*
Abraham Haskell, M.D. *Vice-President.*
John Dixwell, M.D. *Corresponding Secretary.*
John Gorham, M.D. *Recording Secretary.*
Jacob Bigelow, M.D. *Treasurer.*
George Hayward, M.D. *Librarian and Cabinet Keeper.*

CENSORS

For the first Medical District, and Society at large.—Drs Dixwell, Coffin, Chaplin, Wyman, Gorham.

Second District.—Drs Green, Homans, E. Flint, Heywood, Wilder.

Third District.—Drs E. Dwight, Hooker, J. H. Flint, Collins, Hunt.

Fourth District.—Drs B. Rogers, Delamater, A. Perry, C. Worthington, W. H. Tyler.

JOHN GORHAM, *Recording Secretary.*

Medical Lectures.—The Medical Lectures of the Vermont University, (Burlington,) will begin, as usual, on the second Wednesday in September, and continue twelve weeks.

Surgery and Obstetrics, by Henry S. Waterhouse, M. D.

*Chemistry, by George W. Benedict, A. M. Professor of Mathematics and Natural Philosophy in the University.

Anatomy, by John Bell, M. D.

Theory and Practice of Physic and Materia Medica, by William Sweetser, M. D.

Fees for the whole course, forty dollars; and three dollars in addition to be paid by each student on becoming matriculated.

This school, it is believed, offers to the student of Medicine every advantage which can be obtained at any other Medical Institution of the same class. It has heretofore received a good share of public patronage, and the present professors pledge themselves to exert their best abilities, and to spare no expense, which may come within their means, to increase its reputation and usefulness. It is situated in a populous and delightful village, where board may be obtained near the lecture rooms on very reasonable terms.

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* Those students who desire it, may also have an opportunity during the medical term of attending lectures on Natural Philosophy and Mineralogy, by Professor Benedict.

A valuable anatomical museum, the property of Dr Bell, is also to be attached to the institution, and arrangements are made by which a sufficient number of subjects will be obtained, for all the purposes of Anatomical demonstration, as well as for the exhibition of the different Surgical operations.

Medical degrees will be conferred on such gentlemen as have complied with the requisitions of the Faculty of Medicine, at the annual commencement of the university.

It is well known that in May 1824, the elegant and commodious edifice of the University was entirely consumed by fire, but we are happy to state that arrangements have been made for the erection of three spacious and elegant brick buildings, 'on the beautiful and commanding site of the old edifice, and on an improved plan; two of seventy-five feet, in length, each, and three stories high, and a centre building of fifty feet front and four stories high.' One of the side buildings is already considerably advanced, and they are both to be completed the present season. Notwithstanding the misfortunes of the university, it contains at the present time a greater number of students that it has done at any former period.

Dispensary for Hydrocephalic Patients.—The following article is taken from an Edinburgh Newspaper. Although most practical men would probably agree in opinion with the medical gentlemen alluded to in this article, it is certainly interesting to know that the more daring spirits in the profession are to have an opportunity of performing this experiment.

'A most interesting experiment was made a few days ago: that of introducing a canula into the ventricles of the brain of a child of two years old, that died the day before of water in the head, the consequence of acute inflammation of the brain after a fortnight's illness: and upon whose case there had been a great deal of discussing about performing this operation in life, at the father's request, after every other means had been pronounced hopeless; but to which, with the exception of Mr Lizars, and two of the younger members of the profession, some of the most eminent medical men in this place could not be prevailed upon to accede, nor even to give it the sanction of their presence. After the operation, which was performed with great dexterity by Mr Lizars, and after the examination of the brain, which was found perfectly sound, the father observed, in the presence of Dr Barclay and several other medical men, that he had no doubt the time would come when this operation, in desperate cases of water in the head, would be as common as cutting for the stone is now; to which Dr Barclay not only assented, but added, 'and much more simple.' The father has therefore resolved immediately to open the Dispensary advertised in this paper, for the express purpose of putting this practice to the test, whether the public may think proper to give any assistance towards such an attempt or not, and he has come to this determination without any intention of casting the slightest reflection upon the medical men above alluded to, in whom he places the highest confidence, and he is too well acquainted with medicine himself not to know that their opinions are founded upon the doctrine of the schools as at present taught; but the evidence before him has produced a conviction that these, like many other doctrines, will be proved to be erroneous.'

LIST OF NEW PUBLICATIONS.

AMERICAN WORKS.

Anatomical Investigations, comprising descriptions of various fasciæ of the human body; the discoveries of the manner in which the Pericardium is formed from the superficial fasciæ; the capsular ligament of the shoulder joint from the Brachial fasciæ, and the capsular ligament of the hip-joint from the Fascia Lata. To which is added an account of some irregularities of structure and morbid anatomy; with a description of a new anatomical table. By John D. Godman, M.D. &c. &c. Philadelphia. pp. 134. 8vo. 1824.

An Exposition of the dangers of Interment in Cities; illustrated by an account of the funeral rites and customs of the Hebrews, Greeks, Romans and primitive Christians; by ancient and modern ecclesiastical canons, civil statutes, and municipal regulations; and by chemical and physical principles. Chiefly from the works of VICQ D'AZYR of France, and Professor SCIPIONE PIATTOLI of Modena. With additions by FELIX PASCALIS, M.D. pp. 167. 8vo. New York.

A Physiological Essay on Digestion. By Nathan R. Smith, M.D. Professor of Anatomy and Physiology in the University of Vermont. New York. pp. 93. 1825.

An Address delivered at the Commencement of the Berkshire Medical Institution, Pittsfield, Dec. 23, 1824. By Rufus William Bailey, A.M. 8vo. pp. 24 Pittsfield, Mass.

Memoir on the Discovery of a Specific Medicine for the cure and prevention of Yellow Fever, Plague, Malignant, and Pestilential Fevers, with documents authenticated by the results of successful experiments performed by order of the Government and authorities of the city of Havana. By John J. Giraud, M.D. of Baltimore. W. Woody. Baltimore. 8vo. pp. 23.

The Vaccine Inquirer, or Miscellaneous Collections relative to Vaccination. By Gideon B. Smith. No. VI. Baltimore. J. D. Toy.

An Address delivered March 8, 1825, in the Hall of the Medical Faculty of Jefferson College, located in Philadelphia. By B. Rush Rhees, M.D. Professor of Materia Medica in Jefferson College. Philadelphia.

FOREIGN WORKS.

An Analysis of Medical Evidence; comprising directions for practitioners in the view of becoming witnesses in Courts of Justice; and an appendix of professional testimony. By John Gordon Smith, M.D. 8vo. pp. xix. 386. London. 1825.

A Compendium of Theoretical and Practical Medicine; comprising, with the Symptoms, Diagnosis, Prognosis, and the Treatment of Diseases, a general view of Physiology and Pathology, together with an estimate of the present state of Medical Science. By David Uwins, M.D. &c.

An Estimate of the true value of Vaccination as a security against Small-Pox. By T. M. Grenhow, Surgeon, &c. Newcastle. pp. 85. London. 1825.

An Account of the Disease lately prevalent at the General Penitentiary. By P. Mere Latham, M.D. pp. xvii. 286. 8vo. London. 1825.

Observations on the use of the Colchicum autumnale, in the treatment of Gout, and in the proper means of preventing the recurrence of that disorder. By Charles Suchamore, M.D. &c. 8vo. pp. 120. London. 1825.

Collections from the unpublished Medical Writings of the late Caleb Hillier Parry, M.D. F.R.S. &c.

Introductory Essays. By Charles Henry Parry, M.D. F.R.S. 8vo. pp. xxxvi. 243. London. 1825.

A Manual of Pharmacy. By William Thomas Brande, F.R.S. &c. &c. 8vo. pp. xii. 556. London. 1825.

Observations on Vaccination, and on the practice of inoculating for the Small-Pox. By John Conolly, M.D. &c. Stratford-upon-Avon. 1824.

Illustrations of the Arteries connected with Aneurism and Surgical Operations. No. II. By B. G. Dermott, &c. London. 1825.

Report on the Epidemic Cholera, as it has appeared in the territory subject to the Presidency of Fort St. George. Drawn up by order of the government, under the superintendence of the Army medical board. By William Scott, Surgeon and Secretary to the Board. Madras. 1824.

Elements of Medical Jurisprudence. By Theodric Romeyn Beck, M.D. &c. 2d edition, with notes and additions. By William Dunlop. 8vo. pp. 640. London. 1825.

Outlines of Lectures on Mental Diseases. By Alexander Morrison, M.D. &c. &c. pp. 72. 8vo. Edinburgh. 1825.

An Essay on Venereal Diseases, and the uses and abuses of Mercury in their Treatment. By Richard Carmichael. Second edition. 8vo. pp. 376. London and Dublin. 1825.

Report of the Physician of the Small-Pox and Vaccination Hospital. By George Gregory, M.D. 8vo. London. 1825.

Memoire sur la preparation du Phosphore comme medicament. Par J. L. Lescot, Pharmacieu, à Paris. 8vo. pp. 28. Paris.

IN PRESS,

By Wells & Lilly, Boston.

The Lectures of Sir Astley Cooper, Bart. F.R.S. Surgeon to the King, &c. &c. on the Principles and Practice of Surgery; with additional Notes and Cases. By Frederick Tyrrell, Esq. Surgeon to St. Thomas's Hospital, and to the London Ophthalmic Infirmary.

An Elementary System of Physiology. By John Bostock, M.D. F.R.S. L.S. and H.S. M.R.I. Mem. and V. Pres. of the Geological, Mem. and late V. Pres. of the Medical and Chirurgical, and Mem. of the Astronomical Societies of London; Mem. and late Pres. of the Edinburgh Medical Society; Hon. Mem. of the Literary and Philosophical, and of the Historical Societies of New York; Lecturer in Chemistry at Guy's Hospital: Professor of Physiology in the Liverpool Royal Institution, &c. &c.

By J. Disturnell, Troy, N. Y.

Shaw's Manual for the Student of Anatomy, revised, and with Notes. By William Andrews, M.D.

NOTICE TO CORRESPONDENTS.

The Editors acknowledge the receipt of the first and second numbers of the first volume of the 'Carolina Journal of Medicine, Science and Agriculture,' conducted by T. V. Simons, M.D. and William Michel, M.D. The Editors will, with great pleasure, reciprocate this friendly civility of their professional brethren in South Carolina.

ERRATA.

No. 1, Vol. XIV., p. 22, 4th line from bottom, after hemorrhage insert a semicolon. Same line for *and* read *one*.

In the present Number, page 286, last line, for *secure* read *search*.

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Case of Paruria Erratica, or Uroplania. By SALMON AUGUSTUS ARNOLD, M.D.

[Communicated for the New-England Journal of Medicine and Surgery.]

MARIA BURTON aged 27 years, of sound constitution, generally enjoyed good health until June 1820, when she was afflicted with a suppression of the catamenia accompanied by hæmoptysis. The physicians in attendance, irregular practitioners, bled her profusely every other day, and after the system had become greatly debilitated injudiciously administered emetics, to the operation of the last of which succeeded a prolapsus uteri, and a total inability to perform the function of urinary secretion. In this state she continued for nearly two years and a half without any alleviation of the disease, though she had been for the most part of the time under the care of respectable physicians. The urine had been drawn off by the catheter generally every twenty-four hours, but when neglected was often perspired very profusely about the lumbar region.

In September, 1822, soon after I first saw her the urine not having been drawn off by the catheter for seventy-two hours, found an outlet by the right ear, oozing drop by drop, and so continued for several hours after the bladder had been emptied. The next day at five o'clock P. M. it again commenced and continued about as long as on the day preceding, but a larger quantity was discharged. This was projected on a heated shovel and gave out that odour so peculiar to this secretion, indicating the presence of urea. It continued to be discharged once a day for several days, oozing out guttatim, commencing earlier, increasing in quantity and being discharged in less time; then twice a day at three and seven o'clock P. M., varying but very little for some days, then three times a day at two, nine, and eleven o'clock P. M., and so continuing, then four times a day, at ten o'clock A. M. and from eight to eleven o'clock P. M., increasing gradually in quantity and being discharged in less time until a pint was discharged in fifteen minutes in a stream, about the size of a crow quill, then becoming more irregular being discharged every few hours, and increasing in quantity until eighty ounces were discharged in twenty-four hours. The discharge from the ear was accompanied by a severe pain over the right eye and about the right ear, with a distressing sensation of fulness. The pain commenced early in the morning, and continued to increase in violence until after the discharge from the ear, by which it was relieved. When the urine was not discharged at the usual period, or much diminished in quantity the pain and distress were most excruciating, producing delirium, during which confinement was frequently necessary to prevent her from doing violence to her head. Sometimes a deficiency of the discharge would produce delirium, apparently without much pain; she would then laugh,sing,and converse very incoherently, though frequently with an unusual degree of wit and humour. At other times she would be seized with violent spasms resembling opisthotonos; and after continuing in this situation for a few minutes, the muscles becoming relaxed, she would heave a deep sigh, and then swoon, and remain in an insensible state for about half an hour, when she would sob, perhaps open her eyes, and after repeatedly sighing would again become insensible. In this condition she would frequently remain for more than twelve hours in succession. Sometimes the spasms would be unaccompanied with swooning, at one time her jaws were firmly closed for twenty hours, so that it was impossible to pry them open, and at another time they continued closed for more than three days. The swooning would frequently be unaccompanied with spasm, and she would continue insensible for more than twenty-four hours, the pulse imperceptible at the wrist, and respiration only perceptible by the nicest observation. The sight of the right eye was soon destroyed, and frequently that of the left was so impaired that she could not distinguish any object across the room, but the latter is now entirely restored. The hearing of the right ear is so much impaired, that she cannot distinguish sounds, and there is a constant confused noise heard by her like the roaring of a distant water fall. For a short time previously to the discharge from the ear, there is a very audible noise, resembling that produced by water slowly dropping into a vessel, which may be heard at the distance of several feet. She has no power excepting by an inclined position of the head over the discharge, previously to which there is a very painful sensation of fulness and a burning heat about the right ear.

The next outlet the urine found was by the *left* ear, a few moments previously to which discharge, a similar noise is heard to that noticed in the right ear, she cannot hear distinctly for ten or fifteen minutes previously, and after the urine passes off. This discharge is very irregular, sometimes three or four times a week, and then is discontinued for months.

Soon after the discharge from the left ear, the urine found another outlet by the left eye, which commenced weeping in the morning and continued for several hours, producing considerable inflammation; it continued three days and then ceased; sufficient of the discharge was saved to test its properties, in these, and in appearance it did not differ from the discharge of the ear. In the summer of 1824, it recommenced and continued daily for about six weeks. An account of the quantity of this discharge may be found in the appendix.

On the 10th of March, 1823, urine began to be discharged in great quantities from the stomach, unmixed with its contents. The greatest quantity was generally discharged in the morning before taking food, but it was frequently discharged soon after food had been taken, with which it was often entirely unmixed. This discharge has been more regular than from the left ear and eyes, but less so than from the other outlets.

On the 21st April, the right breast became tense and swollen, with considerable pain, and evidently contained a fluid, a few drops of which oozed from the nipple. The swelling and pain continued about twenty-four hours and then entirely ceased for about a week, when it again returned, and there was discharged a light yellow fluid resembling urine. On the 29th, one ounce was caught in a nipple shell which by analysis was found to contain urea. This discharge has been very regular up to this time. Urine has been discharged occasionally from the left breast, an account of which may be found in the Appendix. November 20th, 1823, the urine from the breast became milky, having the appearance of milk considerably diluted with water; this continued until December 12th, when it gradually resumed its usual colour.

May 10th, 1823. The abdomen about the hypogastric and umbilical region became violently and spasmodically contracted into hard bunches, and a sharp pain was felt shooting up from the bladder to the umbilicus, around which there was a severe twisting pain; in a few days subsequently a loud noise was heard, similar to that produced by drawing a cork from a bottle, and immediately afterward urine spirted out from the navel as from a fountain. This discharge has since continued and has rarely been interrupted for many days.

Nature wearied in her irregularities, made her last effort, which completed the phenomena of this case, and established a discharge of urine from the nose. This discharge commenced on the 30th of July 1823, oozing in the morning guttatim and increasing in quantity every day until it ran off in a considerable stream. It continued daily for about two months, when it ceased until the summer of 1824, and then again commenced and continued almost daily for some months, since which it has entirely ceased. All the fluids discharged were found by analysis to contain urea. The following is the analysis, of the fluid discharged from the right ear, made in New-Haven, under the direction of Professor Silliman. "Alkaline Sulphates were indicated by muriate of Barytes and Acetic acid; Muriates were detected by Nitrate and Acetate of Silver, and by Nitrate of Mercury; Phosphates were ascertained to exist by the addition of caustic, ammonia and Lime water. Urea was obtained in the usual manner by evaporating the fluid and re-dissolving in Alcohol and again evaporating."

The urine discharged from the ear was, during the first six months hotter than that from the bladder, producing by its heat pain in the external ear.

The urine from the bladder turned black when not drawn off at the usual period, and deposited a sediment resembling black sand. Sometimes after this black sediment was precipitated the fluid would be of a dingy yellow colour, at other times it would be as black as ink. The urine from the bladder was frequently very high coloured before it turned black, but frequently turned black when it was as perfectly limpid as spring water, and on several occasions it has been noticed that when it was most limpid the largest quantity of black sediment was precipitated. The discharges from the other outlets have, occasionally all turned black; a more particular account of which may be found in the Appendix. They differ however in one respect from the discharge from the bladder, since from the bladder it has never come off black, while it frequently has from all the other outlets. This changing of colours in all the discharges from the different outlets at the same time, is a most convincing proof of the identity of the fluids discharged.

Since the obstruction of the catamenia there has been a discharge of blood supposed to be vicarious, it has generally come on every five or eight weeks, sometimes at the regular period. For the first two years there was a discharge of blood occasionally from the stomach and lungs. It has since been discharged from the stomach and lungs, from the right and left ear, oftener from the left; from the right and left breast, more frequently from the left; from the navel, and from the nose. From the nose and the right ear it has generally been mixed with urine, nearly three fourths urine, from the left ear with about equal parts urine and blood, from the stomach and lungs, with the contents of the stomach and the secretions of the fauces, from the left breast and navel it has generally been unmixed with any other fluid. It was frequently fœtid—the colour always dark—it sometimes, though not generally congulated.

When the urine was not drawn off from the bladder for forty-eight hours or longer, the quantity found in it was always less than when drawn off every twenty-four hours. Sometimes when the urine was not drawn off from the bladder for seventy-two hours, it would be found to contain only one or two ounces. From which I was induced to believe that the discharge from the bladder was almost entirely useless, and that the functions of the system might be performed with very little disturbance without the excretory office of the bladder. Accordingly I omitted to draw off the urine for seven days, when three ounces only were found in the bladder, during which period, the discharges from all the other outlets were increased, and her health did not appear to have in the least suffered. Both the quantity of fluid drank and the quantity discharged from all the outlets during the twenty-four hours, was for several days ascertained and the difference found to be very small.

When the urine was drawn off from the bladder two or three times a day, the quantity discharged from all the other outlets was much decreased, from which I was induced to think, that if it should be drawn off every two or three hours, it would be prevented from passing into the system, and being discharged from the other outlets. I therefore introduced an elastic gum catheter, and directed the urine to be drawn off every two hours, but the catheter in half an hour would be filled up with a thick glutinous substance. This was frequently repeated with no better success. Numerous instruments were invented and when used were all equally unsuccessful.

Pessaries of every description and other means to restore the parts to their natural situation, were used, and for a long time continued without any advantage.

The quantity of urine discharged from all the outlets was so great, and so much beyond what has been thought possible, that I was apprehensive there might have been some deception—to remove every doubt I and my friend Dr Webb, who, at my request had occasionally attended her, remained with her four hours alternately during nearly twenty four hours, and the quantity discharged during this time was as large as it had been for several days previous to, and after this period. There never has been any doubt, that these fluids which have been proved to be urine, were actually discharged from the ear and the other outlets, since the fact has been proved day after day by occular demonstration.

This great disturbance in the system continued to increase for nearly six months, and it was the opinion of all who saw the patient that she could not survive from day to day; after which period it gradually abated, and she is now when the urine is freely discharged, so much relieved that she is able to walk about her room, and during the summer of 1824, frequently rode out. The discharges from the right ear, the right breast and navel, continue daily, but they are not so great nor so frequent as they were a year since, from the bladder the quantity is as usual, from the stomach, nose, and eye, there has for some months been no discharge

How the urine has found its way to these different outlets has hitherto never been explained. It is an interesting question, and I have made some satisfactory experiments which I intend soon to communicate to the public.

Providence, (*R. I.,*) *Jan. 25th,* 1825.

Since the above was prepared for publication I was much surprised to observe, a very *incorrect* and *imperfect* history of this case in the last number of the New-England Journal, by Dr J. D. Fisher, "gathered from verbal reports," and "occasional visits," (*one visit only!*) If he had known that no other history of the case would have been given to the public he *might* then have been justified in publishing this *incorrect* and *imperfect* one, but he well knew previously to the publication of his dissertation that I was preparing this case to communicate to the public.

Several medical *gentlemen* among whom are Drs S. L. Mitchell, and Dr Hosack of New York, have long had by them letters containing a history of this case, and could have published one, much more *correct* and *perfect* than Dr Fisher's, and, though the publication has been so long unavoidably delayed yet none of them have felt authorized to communicate any thing to the public.

August 14*th*, 1825.

Note.—We publish at the particular request of Dr Arnold his remarks with regard to the anticipation of the publication of this case by Dr Fisher in our last number. We regret that he should have taken offence at this circumstance, and we did not regard it in the light of an interference, as he seems to do. Dr Fisher's publication, it is to be recollected was not a simple account of this case, but a dissertation upon the disease of which this was a particular instance—an instance used in common with a variety of others as means of illustration or ground of argument in the course of his essay, and occupying but an inconsiderable portion of it. Whether an author has a right to use in this way, materials thus acquired, we do not pretend to judge. We would add that it was at our request that Dr Fisher consented to the publication of his Dissertation, and that it was not put into our hands until after he had left the country. *Ed. N. E. Journ.*

APPENDIX.

A Diary of the discharges, the appearances and changes in them, together with the most prominent symptoms from the period of the first discharge, until those from all the other outlets were established.

1822.	bladd.	r. ear.	
Sept. 21	37	34	From bladder on 21st turned black, from ear on 21st, 22d, and 23d, not measured, but quantity calculated from wet clothes.
22	16	5	
23	15	7	
24	14	10	Violent pain in head relieved by discharge from ear, pulse 100—skin dry—tongue coated.
25	11	12	Pain increases with sensation of fulness—discharge guttatim—pulse 100.
26	12	13	Pain increases—pulse 100.
27	11	15	Pain very violent—discharge more rapid.
28	12	14	Pain more violent—pulse 120—skin dry and hot—tongue much coated.
29	13	13	
30	12	15	

1822.	bladd.	r. ear.	
Oct. 1	℥10	℥14	Pain still more violent—urine from ear very high coloured—discharged in stream size of a crow-quill
2	12	14	℥4 urine discharged in five minutes—pain commenced about 10, and increased in violence until 5 o'clock, when urine was discharged and head relieved—light extremely painful—can scarely discern objects with right eye.
3	24	14	Urine by cath. twice—discharge commenced two hours later—in other respects no change.
4	12	13	
5		14	Cath. from cause unavoidable not used.
6	4	17	Cath. used at 10 o'clock after an interval of 36 hours, during which ℥32 from ear—and only ℥4 from bladder, discharge commenced 6 hours earlier—from ear and bladder high coloured—from bladder after standing a few hours turned black.
7	30	15	Cath. used morning and evening—pain in head violent—other symptoms unchanged.
8			Introduced an elastic gum cath. and directed urine to be drawn off every two or three hours—cath. filled with a thick viscid substance—urine not drawn off for 36 hours—complains of urinous taste—face and feet œdematous—urine from bladder turned black as ink, and deposited considerable sediment—pulse 120—symptoms unchanged.
9	16	67	
10			
11	6	24	Witnessed discharge of ℥10 in fifteen minutes.
12	18	33	Commenced guttatim and increased to size of a crow-quill—from the ear much hotter—higher coloured urinous odour stronger than from bladder—pulse 120.
13	14	57	℥9 discharged in presence of J. MacRie, M. D. and Mr. Webb, student of medicine, in about half an hour—commenced oozing gradually, increased to a stream size of a crow-quill—produced pain from the

1822.	bladd.	r. ear.	
Oct. 13	℥	℥	heat, in which the thermometer rose to 104, and fell to 94 in that drawn from the bladder—from ear higher coloured and stronger urinous odour than from bladder—less pain in head.
14	14	43	Discharge from ear 10 o'clock A. M. usual colour, after standing a few hours turned as dark as pale ink—4 P. M. a large discharge, usual colour—in about two hours turned a darker colour than that discharged in the morning—8 P. M. ℥8 discharg- in presence of Messrs Fales and Willard, students of medicine, darker than previous discharge, nearly as black as the black urine from bladder—from bladder turned black after standing a few hours and deposited a sediment resembling black sand—pain and heat in head most excruciating—eyes inflamed—pupils dilated—hearing of right ear impaired—pulse 140—skin dry—tongue coated—very thirsty—drinks freely.
15	13	40	From ear dark coloured—sediment resembling black sand is deposited—proportion of sediment one third—other symptoms same as yesterday.
16	14	48	From ear muddy, but lighter than yesterday—from bladder turned black upon standing few hours—pulse 140—in great distress.
17	16	64	From ear turbid, nearly as light as natural—pain in head—eyes a little relieved—from bladder natural colour.
18	12	62	From ear straw colour—from bladder same; vomited ℥6 blood—dark coloured—soon coagulated.
19	20	65	By cath. twice—witnessed discharge of ℥12 from ear in five minutes, previously to which the bladder was emptied.
20	35	44	By cath. three times—pain in head increases—eyes more painful—is wild and delirious—pulse 140—tongue coated and dry.
21	20	45	From bladder twice—symptoms unchanged.

1822.	bladd.	r. ear.	
Oct. 22	317	364	By cath. twice.
23	16	70	By cath. twice—respiration laborious—other symptoms unchanged.
24	15	48	By cath. twice—respiration more laborious—head more painful—right side is numb previously to discharge from ear, by which relieved.
25	16	63	By cath. twice.
26	15	80	Pain in head relieved—other symptoms same.
27	20	50	Symptoms relieved.
28	8	80	
29	16	64	
30	14	50	
31	16	48	
Nov. 1	12	45	
2	16	40	
3	12	8	Convulsed throughout the day—spasms very violent.
4	16	12	Spasms violent—respiration laborious—palpitation of heart—symptoms indicating hydrothorax.
5	14	10	Spasms and other symptoms continue—pulse 140—skin hot and dry.
6	4	12	
7	16	8	Spasms continue—other symptoms relieved.
8	14	18	Spasms relieved.
9	14		Spasms very violent—pain in head excruciating—accompanied by sensation of fulness, and weight—palpitation.
10	16		Spasms more violent—pain and sensation of fulness continue—respiration laborious—palpitation increases—eyes very painful—pulse 150.
11	15	12	Pain in head relieved.
12	14	10	Less pain in head—difficulty of respiration increases.
13	14		Pain in head more violent accompanied by delirium.
14	6		Pain in head excruciating—delirium increases.
15	12	16	Pain in head and delirium continue.
16	14	8	
17	15	10	Delirium relieved in some degree after dis-

1822.	bladd.	r. ear.	
Nov. 17	℥	℥	charge from ear—pain in head and other symptoms continue.
18	12	1	Delirium relieved—spasms increase.
19	14	8	
20	14	24	Spasms relieved—vomited ℥4 blood—dark colour.
21	9	15	From Nov. 21st to Dec. 7th, from cause unavoidable no history of case.
Dec. 7	8		Violent pain in head with sensation of fulness—and burning heat about right ear—delirium—skin hot and dry—tongue much coated—pulse 140.
8	10		Pain in head increases—other symptoms continue.
9	20		
10	1		Pain in head excruciating—other symptoms continue.
11	20	16	Pain in head and delirium in some degree relieved.
12	14		Delirium increases—pain in head more violent.
13	16		
14	10	12	Delirium continues—less pain in head.
15	12	8	
			From the 15th to 22d, no discharge from ear—from bladder rather more than usual quantity—not measured—delirium violent—pain in head most excruciating with sensation of fulness—burning heat about right ear—pulse 150—palpitation—skin dry—tongue coated.
22	12	8	Pain in head relieved after discharge from ear—other symptoms same.
23	14	8	
24	10	24	
25	7	8	
26	10		Pain in head more violent.
27	12	4	
			From 27th to 31st of Dec., no discharge from ear—increased quantity from bladder—increased delirium—violent pain in head pulse 150.
1823.			
Jan. 1	12	32	Delirium and pain in head relieved—urine from ear coloured with blood—on 3d, Cath. not used—on 4th, urine from bladder black.
2	14	32	
3		52	
4	2	50	

1823.	bladd.	r. ear.	
Jan. 5	℥3	℥26	Pain—delirium—palpitation—and all the symptoms entirely relieved—pulse 100.
6	8	66	
7	12	60	
8	12	47	
9	8	50	
10	12	6	Pain in head increases—spasm and swooning alternately.
11	8	12	
12	16	30	Pain in head relieved—spasm and swooning not so frequent.
13	12	39	
14	14	25	Urine discharged from *left* ear—about ℥ss. saved—in odour and colour does not differ from discharge from right ear.
15	12	8	Pain in head more violent—swooning frequent—pulse 140.
16	10	8	Swooned ten times—sometimes remains insensible more than an hour.
17	8	12	Pulse 120—swooning not so frequent, nor so long insensible.
18	2	20	
19		12	
20	8	7	Urine from bladder turned black—swooning relieved.
21	12	10	Delirium from 21st to 25th, so wild and raving as to suffer no one to come near her—on 24th, no urine from ear, though the usual sensation of heat and fulness—generally felt previously to the discharge—urine discharged from left eye guttatim about 2 hours in morning.
22	14	9	
23	20	4	
24			
25	16	32	From ear when discharged as black as pale ink—from bladder turned black after two hours—urine continues oozing from eye in morning—pain in head relieved—delirium continues—is very humorous—laughs and sings and talks incoherently—pulse 120.
26	16	32	More rational—swooning returns, succeeded by unusual numbness, except in the fingers—pain changed from vertex and over right eye to back of the head—urine continues weeping from eye—℥1 saved, does not differ from discharge from ear—pulse 120.
27	16	30	After swooning continued insensible for an

1823.	bladd.	r. ear.	
Jan. 27	℥	℥	hour—not the least sensation for several hours excepting about the windpipe—urine from eye ceased—pulse 121—pain in head continues.
28	12	28	Swooning not so frequent—succeeded by numbness of right side.
29	6	32	
30		7	Swooned at 10 A. M. and remained insensible until next day at half past 10 o'clock A. M.
31	10	27	From ear turbid—from bladder light inky hue–both turned black–swooning relieved.
Feb. 1	12	24	In evening from ear ℥14 in presence of Mr. Webb and myself, as black as ink—specimens were sent to Dr Mitchell, New-York and Dr Gorham, Boston.
2	10	20	From ear colour of pale ink—from bladder turbid and turned black.
3		24	From ear turbid—though no urine from bladder, yet no distension—from left ear ℥6 bloody urine.
4		26	
5		30	
6	14		Violent pain in head—scalp tender and painful.
7	8	16	Head very painful—pulse 140.
8	8	12	
9	16	3	
10	8	4	Pain in head relieved—pulse 100—urine from bladder not measured.
11		32	
12		28	
13		16	
14		17	
15		20	
16		17	
17		21	
18		8	
19		16	
20		18	
21		14	
22		20	
23		18	
24		24	
25		18	
26	12	4	Violent pain and sensation of fulness in head.
27	10	6	Insensible—drowsing every 3 or 4 hours and immediately swooning—pulse 120.
28	8	11	

1823.	bladd.	r. ear.	stom.	
Mar. 1	℥12	℥15	℥	Swooning relieved—head less painful—pulse 100.
2	12	18		
3	13	17		
4	12	20		
5	14	20		
6	12	20		
7	12	21		
8	14	16		
9		14		
10	8	12	16	Urine from stomach, without much nausea, unmixed with its contents colour light yellow—from ear same—pulse 100.—not much pain.
11		16	18	
12	2		20	From bladder turned black—from stomach light yellow.
13		12	24	From ear deep, from stomach light yellow—discharge from stomach found by analysis to contain urea, and some of the salts usually found in urine.
14	18			From bladder turned black—pain and sensation of fulness in head.
15		16		Pain continues—urine high coloured.
16	16			From bladder turned black.
17		6		Spasms commenced at 4 P. M., and continued until two o'clock A. M., in the muscles of the jaws, so violent, as impossible to be opened.
18	16	20		Spams relieved—from bladder black.
19	20	12		
20	18	8	12	Spasms returned.
21	14	16	18	Spasms relieved—from stomach mixed with blood.
22	12	12		
23	14	16		
24	12	18		
25	15	17		
26	12			Violent pain in head and delirium—pulse 120.
27	10	6		Pain and delirium continue—pulse 130.
28		16		
29	16	18	12	From bladder turned black—from other outlets light yellow—pain and delirium relieved—pulse 120.
30		16		

1823.	bladd.	r. ear.	stomach	
Mar. 31	℥10	℥6	℥16	From bladder turned black.
April 1	8		16	From stomach black as ink when thrown up.
2	10		8	Violent pain and sensation of fulness in head—delirium—pulse 140—sight of left eye impaired—right entirely destroyed.
3	6	8	16	From the stomach and ear turbid, in few hours turned black—sensation of fulness in head—eyes very painful.
4	10	20		Pain in head, in some degree relieved—eyes very painful—constant nausea accompanied discharge of urine from stomach.
5	12	16	4	
6	12	12		
7	10	16	18	
8	12	18		
9	20	30		
10	16	27		
11	8	16		
12	12	12	16	
13	7	18		
14			61	From stomach as black as ink when discharged—after which pain in head relieved—constant nausea.
15	6	4		From bladder black.
16	10		40	From stomach black.
17	12	18		Pain in head relieved.
18	8	30	28	From stomach black—from bladder high coloured—turned black in few hours.
19	20		18	From bladder dark yellow with a redish cast, turned black after standing few hours—from stomach light yellow and turned black.
20	16	12	30	From ear usual colour, turned black in six hours—from stomach black—from bladder light straw colour, turned black in four hours—in less pain than she has had since urine was first discharged from ear—pulse 100.
21	20	16	48	From stomach black—from ear and bladder light yellow—from bladder turned black—tension and swelling

1823.	bladd.	r. ear.	stomach	r. breast	
Apr. 21	℥	℥	℥		in right breast—few drops of a light yellow fluid oozes out.
22	24	10	40		Urine from all outlets regained its natural colour—that from stomach has a very fœtid smell and saline taste.
23	14	8	40		
24	22	12	64		From bladder straw colour—from ear pale black—from stomach came off in two portions—first ℥28 rather darker than natural—turned black after standing few hours—the other ℥36 of deep black—when discharged dull pain in head.
25	16	8	64		From bladder deep orange—ear straw coloured—stomach a very deep black.
26	10	14	36		From bladder straw colour—ear little darker hue—stomach pale black—pain in head and delirium.
27	20	8			From bladder lighter than usual—ear deep orange approaching to red—delirium continues—swooning—and spasms—pain and tension of right breast—few drops ooze from nipple—pulse 120—incubus.
28	18	15	34		From bladder light straw colour—ear dingy yellow—stomach natural colour—while present she put a thick cloth to her breast, in a few minutes was completely soaked with water—which had the smell of urine—when dropped upon a heated shovel threw off the pungent fumes so peculiar to this secretion, indicating the presence of urea.
29	14	16	46	31	From bladder light yellow—ear straw colour—stomach dirty yellow—breast light yellow.
30	16	16	44	7	From bladder and ear straw colour—stomach dirty yellow—breast partly white and partly

1823.	bladd.	r. ear.	stomach	r. breast	
Apr. 30	ʒ	ʒ	ʒ	ʒ	of yellowish cast—patient is rational and complains of nothing except a disagreeable sickness occasioned by the rank smell of urine from breast.
May 1	16	17	28	12	From bladder and ear straw colour—stomach dingy yellow—breast yellow—discharged considerable blood from stomach and complains of gnawing pain.
2	14	6	50	8	From bladder light yellow—ear and stomach dingy yellow—breast three portions—1st a reddish tinge—2d limpid—3d considerably bloody, about colour of currant wine.
3	8	9	32	18	From bladder deep yellow—ear, stomach, and breast straw colour.
4	17	16	52	8	From bladder light yellow—rest dark colour.
5	18	17	57	12	
6	16	16	44	12	
7	17		40	13	
8	15	14	40	8	
9	17		42	13	From bladder straw colour—stomach black—breast dark yellow—and turned black.
10		47		17	From cause unavoidable catheter not used.
11		40		16	
12	18	36		4	From bladder deep yellow—and turned black—other outlets deep yellow.
13	6	18	28	6	From bladder light colour—turned black—from other outlets black—all deposited black sediment—feet and legs œdematous—urine begins to be discharged from navel.

1823.	bladd.	r. ear.	stomach	r. breast	navel.	
May 14	℥30	℥13	℥42	℥12	℥10	From bladder dingy yellow—other outlets black—a small discharge from left ear.
15	14	16	76	10	6	From bladder light coloured—ear, stomach, and breast black—navel dirty white—while urine is passing the navel she suffers a painful sensation like that which would be produced by a dagger being thrust into the body.
16	18	13	54	4	24	From bladder lemon yellow, ear and stomach, dirty yellow—one portion from navel same as yesterday—others light yellow.
17	16	12		13	30	The whole lemon or yellow colour.
18	20	16			32	Colour same as yesterday.
19	5	11	20	16	22	From ear, stomach, and navel, like dirty water—breast black—bladder light yellow—℥16 discharged from left ear.
20	24	16		7	27	From bladder nearly limpid, without sediment—it soon turned black and deposited a thick sediment—ear and breast light colour—navel high coloured and turned black—patient complains of tension and swelling of left breast—this affection differs from the right breast, being attended with a sensation of coldness—in the right is a fluctuation perceived by striking with the fingers—the left is hard and firm—constriction of chest,

1823.	bladd.	r. ear.	stomach	r. breast.	navel.	
May 20	℥	℥	℥	℥	℥	and a saltish taste which generally precedes the vicarious discharge from lungs.
21	18	10		13	16	Colour of all discharges light yellow—℥6 of thick dark coloured blood discharged from left breast in morning—pain and sensation of coldness and tension relieved—in evening in presence of Mr Webb, discharged a considerable quantity, which in colour resembled the expressed juice of the phytolacca decandra, and in smell, sulphurated hydrogen given off by putrid eggs.
22	20			9	46	℥18 discharged from left ear, colour deep yellow—℥6 from left breast tinged with blood.
23	20	17	12	14	60	The left breast continues painful—small discharge of reddish cast–from navel very high colour—from bladder limpid——others light yellow—the greater part discharged in morning previously to drinking.
24						No history of case.
25						
26	12	12	14	8	8	From stomach dark colour
27		12		8		
28	½	12				From bladder black—ear dark yellow.
29	2			8		Violent pain in head sensation of swooning—pulse 150—eyes painful.
30	2	12				Symptoms continue.
31	10	16				

1823.	bladd.	r. ear.	stomach	r. breast	navel.	
May 14	ʒ30	ʒ13	ʒ42	ʒ12	ʒ10	From bladder dingy yellow—other outlets black—a small discharge from left ear.
15	14	16	76	10	6	From bladder light coloured—ear, stomach, and breast black—navel dirty white—while urine is passing the navel she suffers a painful sensation like that which would be produced by a dagger being thrust into the body.
16	18	13	54	4	24	From bladder lemon yellow, ear and stomach, dirty yellow—one portion from navel same as yesterday—others light yellow.
17	16	12		13	30	The whole lemon or yellow colour.
18	20	16			32	Colour same as yesterday.
19	5	11	20	16	22	From ear, stomach, and navel, like dirty water—breast black—bladder light yellow—ʒ16 discharged from left ear.
20	24	16		7	27	From bladder nearly limpid, without sediment—it soon turned black and deposited a thick sediment—ear and breast light colour—navel high coloured and turned black—patient complains of tension and swelling of left breast—this affection differs from the right breast, being attended with a sensation of coldness—in the right is a fluctuation perceived by striking with the fingers—the left is hard and firm—constriction of chest,

1823.	bladd.	r. ear.	stomach	r. breast.	navel.	
May 20	ʒ	ʒ	ʒ	ʒ	ʒ	and a saltish taste which generally precedes the vicarious discharge from lungs.
21	18	10		13	16	Colour of all discharges light yellow—ʒ6 of thick dark coloured blood discharged from left breast in morning—pain and sensation of coldness and tension relieved—in evening in presence of Mr Webb, discharged a considerable quantity, which in colour resembled the expressed juice of the phytolacca decandra, and in smell, sulphurated hydrogen given off by putrid eggs.
22	20			9	46	ʒ18 discharged from left ear, colour deep yellow—ʒ6 from left breast tinged with blood.
23	20	17	12	14	60	The left breast continues painful—small discharge of reddish cast–from navel very high colour—from bladder limpid——others light yellow—the greater part discharged in morning previously to drinking.
24						No history of case.
25						
26	12	12	14	8	8	From stomach dark colour
27		12		8		
28	½	12				From bladder black—ear dark yellow.
29	2			8		Violent pain in head sensation of swooning—pulse 150—eyes painful.
30	2	12				Symptoms continue.
31	10	16				

1823.	bladd.	r. ear.	stomach	r. breast.	navel.	
June 1	ʒ12	℥16	ʒ	℥12	ʒ	Less pain in head.
2	12	30		8		
3	14	32		6	8	Pain in head and swooning relieved.
4	10	34		6		
5	12	24		6		
6	14	20		8		
7	12	18		7		
8	10	24		9		ʒ8 of urine from left ear mixed with blood.
9	16	20				
10		16				
11	4	18		8		From bladder high coloured —turned black—ear and breast yellow.
12	8	12		8		From the 12th to 25th average quantity from ear ʒ20—bladder ʒ8–breast ʒ6.
						From 25th of June to 2d July, no discharge from either outlet, though cath. used every day—violent pain in head with sensation of fulness—palpitation—delirium—pulse 150 —tongue coated—restless —trembling—swooning.
						From 2d to 20th of July, average quantity from ear ʒ18—breast ʒ6—bladder ℥5—occasionally discharge from navel.
July 21	4	16		8		℥16 discharged from left ear —colour as from right.
22	8	28				From right ear mixed with blood—℥28 from left ear, light yellow–turned black in 3 hours.
23	4	18		8	4	From right ear tinged with blood—℥14 from left—light yellow.
24	14	16		8	12	From right ear mixed with

1823.	bladd.	r. ear.	stomach	r.breast.	navel.	nose.	
July 24	℥	℥	℥	℥	℥	℥	blood—℥12 from left—yellow.
25	16	20		8	8		
26	8	16		7			
27		18		8	16		
28	7	48		12	8		From bladder usual colour—turned black.
29	8						Violent spasms.
30		20			16	6	Spasms not so violent.
31	12	32		8	16	10	From bladder black.
Aug. 1	12	24		8	10	12	
2	16	20		8	12	6	
3	16	16		8		16	
4		12		8		16	
5	12	16	15	8		16	From bladder black.
6	16	18	20	8		17	
7		16	22	16		12	
8	4	14	18	16	10	14	From bladder turned black.
9		28	17	16	12	13	

The following average is calculated from diaries kept by Messrs Charles Goodwin and P. W. Fearing.

Average quantity from August, 1823, to June, 1824—from bladder ℥12—from right ear ℥18—from right breast ℥15—from navel ℥20—from stomach, nose, eye, left ear, and left breast, the discharges have been so irregular that an average has not been calculated.

The following is an extract from the diary kept during the summer of 1824, by Mr Ed. W. Greene student of medicine, which is annexed to show the quantity daily discharged from the left eye.

1824.	bladd.	r. ear.	stomach	breast.	navel.	nose.	l. eye.	
July 20	℥16	℥15		℥12	℥13	ʒ2	ʒ2	
21	10	32		36	17	1	1½	
22	16	30		16	10			
23	14	35		20	36	3	3	
24	10	32		8	16	14	13	Health much improved and when discharges are regular, free from pain.
25	12	30		16	30	16	6	
26	20	46		16	38	16	8	
27	16	52		16	48	17	6	
29	12	40		17	27	16	8	
30	16	47		5	20	16	8	
31	10	54		16	44	16	5	

August 14*th*, 1825.

Case of extirpation of an Ovarian Sac, designed for the cure of the Hydrops Ovarii. By Jos. A. Gallup, M. D.

[Communicated for the New-England Journal of Medicine and Surgery.]

THE subject of this case was a Mrs Kendall, aged 48. She had lived in a connubial state for many years but had never borne children, although she had been quite regularly visited with the common catamenial preparations. These discharges even appeared several lunations after the present disease had become very apparent. Her manner of living had been temperate, and her habit might be called pretty good, not however very robust, and occasionally subject to slight and fugitive indispositions.

The first knowledge I had of the case was on the 27th of January, 1824, at which time I visited her in company with Dr Skinner, the attending physician. I was then instructed, that for about four or five months previous, her health had been poor, being subject to pain and distress in her left side, or iliac region, attended with tumefaction; also febrile symptoms, costiveness, dry skin, &c. Upon examination I experienced no difficulty in considering it a case of Ovarian Dropsy. The tumour had already reached the right hypochondrium and covered the margin of the liver, the most elevated however on the left side, and extended quite from the hypogastrium to the epigastric region, evidently of an oblate spheroidal form. No schirrosity could be felt internally, neither were there any tuberculated appearances externally. Only a few simple medicines were advised and the case left for consideration.

On the 26th of February I saw her again; the intumescence had increased so that it was very equal over the abdomen, the distress was considerable, quite sufficient to warrant the diminishing of the tumour by means of the trocar. From the usual place for the paracentesis of the left side, twelve and an half pounds of a fluid were taken with common ease. It was a little thicker than the fluid of ascites usually is, but very much resembled it. It did not have the properties of this, for it would not coagulate by dilute sulphuric acid, nor by heat at the boiling point. This confirmed us in the belief of its being exhaled from the mucous membrane of the ovarium. The tumefaction subsided in an equable manner, and although a slight fulness remained, we could not discover any hardness resembling schirrosity. The patient was very much relieved, but as we expected, only for a short period. In 36 days after this she required to be tapped again, and this was done five times by the attending physician by the 4th of June. The periods of its necessity occurring at shorter intervals, so that from the 26th of February to the 4th of June 115½ lbs., were taken at six tappings.

During this time, on the 20th of May, I saw this patient on account of much distress in the pelvic region, severe throes were experienced, and I was told a solid tumour presented posterior to the vagina:—I had been assured, and I believe it was true, that fœcal discharges had been effected, and especially by cathartics; notwithstanding a large scybalum was discovered in the rectum; it was round and had nearly the solidity of a dry unburnt brick, but more unctuous and tenacious; it must have weighed between two and three pounds. The finger made but a slow impression on it; however, it was removed in this manner and by the help of an iron spoon flattened at the sides. She was effectually relieved. Although rather foreign to the case in a direct point of view, it was thought proper to relate this circumstance as a necessary appendage. She had been tapped eight days before this, and again required it three days after. Her general health was rather declining.

During all my occasional visits to her, something had been said to me, by different parties, relative to an attempt at a radical cure by extirpation of the sac. I had constantly declined giving an opinion, but stated to them freely, so far as I could understand the case, the actual condition of it; observing at the same time that various circumstances might exist to forbid it, which might be entirely out of our present view.

On the 12th of June, I was requested to visit her again in company with Doctors Bowen, Skinner, Gibson, and several other neigbouring physicians for the purpose of deciding on the expediency of extirpation of the sac, and assisting in doing it if so decided. Upon investigation we concluded it might be justifiable, and on stating the case to the patient and friends they appeared altogether willing to risk the event. Accordingly Dr Bowen and myself, assisted by the others, proceeded to the operation.

An incision being made in the linea alba, the walls of the tumour immediately presented. Instead of finding a thin pliable membranous sac, as we hoped, a dark, strong, thick wall of a tumour exhibited itself, very much of a mahogany colour, or rather showing much the appearance of a large bottle of the elastic vegetable gum. The conical part of the tumour evidently possessed considerable thickness, but the base was discovered to be very thick and solid. The Fallopian tube showed itself, considerably extended. but preserving its usual tortuous course, a little enlarged, and at the end the fimbriæ turgid and red, about the size of a mulberry.

At this stage of the business to retrace our steps was impossible, as the sac needed emptying in order to relieve the patient; to proceed seemed very appalling. However, we punctured the sac, but on account of the siziness of the contents but little was evacuated until an incision was made into it. As the sac was every where free from adhesions we proceeded to take off portions of the superior part. It was about half an inch thick towards the superior part, appeared to be vascular but discharged only a little blood. It did not very readily collapse after the contents were evacuated, but inclined to keep its shape, otherwise than the sides would fall slowly together at the superior part. In pursuing the dissection we could have access to about two thirds of the sac towards its base and it was divided at this point. The thickness of its walls was about three quarters of an inch, say half the way, and the remainder about an inch. It was very vascular and bled freely especially at the thickest part which was the exterior part or left side of the tumour. We had to stop the incision and pass long stitches through the upper edge of the remaining part of the sac, by carrying the ligatures through on each side at about every inch; in this manner we inclosed the whole substance in continuous interrupted sutures. As we cut we tied, until the upper section was removed. Some portion of this section did not require the ligatures. The remaining part of the sac exhibited rather stubborn walls, having some resemblance to the sight to a thick dish of domestic earthen ware smooth on both sides. The base was fixed on the solid parts opposite the natural site of the ovarium. Instead of a small pedicle as we hoped, the tumour sat directly on the solid parts contiguous to the os innominatum, occupying a space of about four and an half inches in diameter. Upon examining the lower chamber of the abdomen, the uterus appeared quite natural but rather small; a cluster of scirrhosities was discovered on the right side of the uterus and in close contact with it, three in number. No further morbid appearances at this time, except that the left Fallopian tube, which was removed, contained four or five calculous granulations about the size of a barley corn. The hydropic sac seemed to us to possess a carcinomatous appearance, but altered by the morbid secretion into its cavity occasioning distension.

Our expectations of success were blasted long before we could liberate our patient from her unpleasant situation. Every thing was adjusted as well as the untoward state of things would admit. The ligatures were left long enough to reach without the wound, and came away in four or five days. I never saw the patient after the operation but am indebted to the attending physician for the phenomena and treatment whilst she lived, and for the post mortem appearances.

Symptoms of fever supervened, but were very considerably kept under by a mild antiphlogistic treatment, four moderate bleedings, several laxatives, sudorifics, &c. She had some tetanic symptoms in the muscles of the neck and throat, but not so severe as to prevent swallowing some food and medicine. She died six days after the operation in full possession of her mental faculties. She was so far from blaming her medical attendants that she wished it to be distinctly understood that the operation had never been urged upon her by any one, and that the probability of embarrassing circumstances had been fairly stated, and she believed the untoward condition of her case was difficult to be fully appreciated beforehand.

Upon inspecting the abdomen, the principal viscus inflamed was the lower part of the omentum; this had become largely swollen and a little protruded at the wound. The base of the sac that was left had discharged the ligatures and contracted at the edges in such manner as to adhere and form a sac containing about a pint of purulent matter. No mention is made of any lodgment of matter in the pelvis, it having free vent at the wound, and during the latter part of the time mended in quality and diminished in quantity. Some adhesion of the uterus to the bladder, and the right Fallopian tube, about half an inch in diameter, and very solid. Intestines, mesentery, peritoneum, &c. quite free from inflammation. The tuberculated ovarium before mentioned is stated to have been about the size of a goose egg, hard almost as cartilage.

REMARKS.

It has been suggested on some occasions, that medical men are more fond of publishing their fortunate cases than their reverse ones. It may however be a duty on many occasions, which ought not to be shunned, to give publicity to cases which have been misjudged or even mismanaged. There may be no disease which requires investigation at present more than the one under consideration. The subjects of it have been doomed to inevitable death sooner or later, and in cases like the present the fatal period cannot long be procrastinated by the trocar; and even this mode is not always practicable, and has generally been deprecated by our predecessors. With respect to a radical cure by extirpation, this has almost universally been esteemed impracticable; it is said that De Haen regarded it as doubtful, and that Morgagni asserted it to be impossible. Dr Good, who wrote only a very few years past, says 'a more radical mode has been proposed, but so far as I know only proposed, that of extirpating the ovarium.' However it now appears that this operation had been performed several times before as well as since then.

If something can be gained in the treatment of this acknowledged incurable malady, then a little may further be added to the triumphs of modern surgery. A single unfortunate case should not totally discourage; nay even five in ten should not dishearten, for even in this ratio the sum of human misery would be diminished. It is very certain that structural derangements often exist in considerable degree, beside the mere formation of a sac; these cannot always be detected. But again, it is pretty evident that the disease may exist very locally in the ovarium, this organ merely enlarging into a sac like some other encysted tumours, and without a constitutional carcinomatous diathesis. That this is the fact seems pretty evident by the successful case of Dr Nathan Smith. If I recollect right this subject had borne children whilst affected with the complaint. The sac had ruptured several times, and the contents diffused into the cavity of the abdomen, and readily taken up by the absorbents of the serous tissue. The same eminent operator had another case which was unsuccessful, but I am not instructed in the particulars, nor do I know that it was ever published.

It appears, from some notices in the Medical Intelligencer, that Dr McDowell of Kentucky, has operated in three cases, all successful. Through the medium of some foreign influence, these were published at Edinburgh in the Medical and Physical Journal. Mr Lizars of that place it seems promulgated them, and at the same time published a successful case of his own. It is also stated that L'Aumonier, at Rouen, performed this operation successfully about fifty years ago; and that it has often been performed in France and Germany; but how many times it has been performed *un*successfully remains, perhaps, yet to be written in history.

Undoubtedly we ought to be discreetly cautious in recommending new and hazardous operations; for myself, my prevailing views have been rather hostile to this operation, and still are unless under rigid restrictions. But on further reflection I am more disposed to think it oftener justifiable than heretofore. The present case, although unfortunate, may be instructive. The embarrassing circumstances met with occasioned uncommon delay, and doubtless more irritation was produced than would have been under more favourable conditions. There was a necessity of the external incision being some larger than usual; so many sutures attached to a morbid incised surface, passing by several viscera and extending through the incision in the parietes must have given considerable irritation, and also been the means of too easy access of the atmospheric air to the peritoneum. The contact of blood and impure pus probably aggravated also. Notwithstanding, the subject lived six days, and upon inspection the lower section only of the omentum was the part essentially inflamed. The peritoneum generally investing the viscera and walls of the parietes was free from the signs of inflammation, as reported, except some adhesion of the bladder to the uterus, and the thick sac of the tumour had actually closed its edges by an adhesive process.

The serous membrane of the abdomen is known to bear atmospheric air on some occasions with impunity, but not often to a great extent without essential danger. It is reported that the Cæsarean section has been performed 231 times in different countries, by collections made by Dr Hull; and that 139 of these had been successful. Wounds in this region often do well; and the almost universal success of those who extirpate the ovaria in sows may add something to our reasoning. Undoubtedly to insure the greatest chance of success, wounds penetrating this cavity ought to be strictly closed and as quickly as possible.

Whilst I would be understood, from present views, as favouring the operation of extirpating the ovarian sac in certain cases, yet very surely, it ought not to be attempted in others. A group of diagnostics in this particular is a desideratum in present practice. Perhaps the local situation of the complaint is such as forever to screen from the most scrutinizing inquiry certain defects or conditions which are important. Something then must be left at hazard, as in many other operations. Possibly some advances may now be made in the diagnostics of the complaint serving to direct the practicability of the operation. It may be suggested for consideration, to insure the greatest probability of success,

1st, That the subject be not very far advanced in life.
2d, That she be of that habit which is commonly denominated healthy.
3d, That she be free from other diseases of a constitutional character.
4th, That no tubercular indurations be discovered externally, nor by the tact on the abdomen, nor by the vagina.
5th, That if the subject has been tapped, on inspection of the fluid, it is limpid and diaphanous, seemingly possessing homogeneous properties, void of ichor.
6th, That no considerable fulness or hardness be discovered in the region of the tumour after tapping.
7th, That menstruation has been pretty constant, and she has borne children, especially since the complaint has been upon her.
8th, That she be not very corpulent and has been temperate in the use of ardent spirits.
9th. That if the sac shall have burst on certain accidents, the contents have been absorbed in the abdomen.
10th, That the pulse be not very frequent, and digestion be well performed.

The reverse of these particulars will probably render the operation more or less hazardous according to circumstances. Further morbid dissections seem necessary, for the purpose of discovering whether cases of this kind are generally attended with scirrhous indurations, or whether the sac is commonly thin and pliable.

Wooodstock, (Vt.) July 4th, 1825.

MISCELLANEOUS NOTICES.

Large Doses of Calomel in Syphilis and other diseases.—Dr Cartwright of Natchez, (Miss.,) in the Medical Recorder, gives as the result of his observation in Syphilis, that calomel in large doses, e. g. twenty grains, taken at intervals of a day or two, is the best remedy in both recent and chronic cases of this disorder. He mentions a number of cases in which this method of administering mercury was tried and proved abundantly successful. He does not consider the constitutional effect of mercury to be necessary to its curative influence and he therefore avoids ptyalism; and his method has this further recommendation, that it does not cut off the patient necessarily from his ordinary diet or labour. Calomel administered in this way operates without violence, bringing away generally black bilious stools. He supports this view of the administration of calomel by the success which follows its use in other disorders. In his own case, being seized after much exposure to cold and wet, with a violent pain in his stomach, constant vomiting, constipated bowels, cold skin and small pulse; he took in the evening 120 grains of calomel, and awoke in the morning free from pain; after some time he had a single, copious, black bilious evacuation and was entirely relieved. In another case related by Dr Cartwright, of a child who was supposed to be dying from Cynanche trachealis, he reasoned 'that in consequence of a suspension of the secretory process of the skin, as indicated by its dryness and insensibility; in the kidneys by the paucity of urine; in the liver, by the difficulty of procuring bilious evacuations, that nature was committing suicide by filling the bronchial tubes with an immoderate secretion.' He gave him three grains of Tartarized Antimony and 100 of calomel; it operated only once producing a copious black, and bilious stool. In twelve hours the same dose was repeated—it operated twice, and the patient began to amend. In twelve hours more forty grains were given, which operated four times; and a few more smaller doses completed the cure. The child was four years old.

Extraction of an Infant from the Abdomen.—Dr Benjamin Day, in the Medical Recorder, relates a case in which it became necessary to cut into the abdomen and extract an infant which, as he supposed, had escaped from the uterus. The woman recovered, and the nature of the case cannot therefore be made perfectly clear. At his first visit, the midwife informed him that the waters had been evacuated; but he found the os uteri not dilated, although labour had then continued several days. Pains continued several weeks. The woman became anasarcous, extremely weak and emaciated. A sinus was discovered near the umbilicus leading into the abdomen. This was followed up; the child was found, and extracted through an incision six inches in extent. It would seem rather more probable that this was an extra-uterine conception, than that the child had escaped into the abdomen after the commencement of labour. There seems to have been no sufficient proof that it was ever in the uterus; and nothing is said of the place of attachment of the placenta, or of its delivery.

Case of Extra-Uterine Conception and apparent superfœtation.—Dr Daniel H. Trevezant in the Medical Recorder relates this case which is very singular and curious. The subject, who was a negro, died very suddenly after complaining that she felt something burst within her. On inspecting the body, a considerable quantity of coagulated blood was found, covering the anterior surface of the intestines, and lying between the intestines and sides. The whole abdominal cavity and interstices were filled with bloody serum. Among the intestines was discovered a fœtus of six or seven months, with all its usual accompaniments, and in perfect preservation. A large vesicle was observed on the outside of the membranes, about the size of a walnut, which contained another fœtus, of about six or seven weeks old; also perfectly preserved, and presenting all the usual appearances. Its placenta was attached to the external portion of the investing membranes of the larger one. Dr T. supposes this double conception to have been contained either in the right ovarium or fallopian tube, but the parts were so much disturbed as to prevent their being recognized. He thinks that the phenomena in this case, can only be accounted for according to the doctrine of superfœtation.

Case of Tetanus from Gun-shot wound controlled by Caustic Issue applied to the spine. By DAVID MEREDITH REESE, M. D.—Dr R. relates the case of a boy of 15, who received two buck-shot in the spine and suffered in consequence paralysis of the lower extremities. On the seventh day he was seized with opisthotonos, and after the exhibition of laudanum in drachm doses, through the night, in the morning the caustic potass was applied the whole length of the spine, and half a drop of prussic acid given every hour. In four hours after this treatment, all the symptoms were mitigated, he fell into a placid sleep and after six hours awoke free from the tetanic symptoms. The case continued to do well in other respects and at the time of the report, the patient was able to walk about with the assistance of a stick.

Dr Reese also relates a case of empyema in which pus was discharged very freely from the stomach and bowels, and was supposed during life to proceed from the liver. After death, a collection of fœtid purulent matter, was discovered on the left side of the mediastinum, and it was found to have had a communication with the stomach, through an opening into the œsophagus, about an inch and a half above the cardiac orifice of the stomach.

Case of Ileus, with obstinate constipation, as a consequence of Intus-susceptio, cured by an operation.—Having selected for our present number a considerable variety of cases in which the abdominal cavity has been laid open and the intestines exposed, on account of disease connected with the organs of reproduction, we add to them the following abstract of the history of a case where the same operation was resorted to in a male subject with a different object. The original paper is in Hufeland's Journal der practischen Heilkunde, and was communicated by "Kreisphysicus, Dr Fuschsius in Olpe," a name we do not entirely comprehend.

The subject was a healthy man, æt. 28, who was attacked with violent colicky pains, some vomiting and obstinate constipation. The narrator of the case saw him on the fifth day in consultation. The whole abdomen was tender, and a hardened spot was felt, extending from about two inches above the navel on the right side, as far as the rectus muscle on the left. This was the chief seat of pain. Leeches, bleeding, cathartics, injections, opium, &c. were administered without effect, or with only a temporary relief; the physician in attendance became convinced that mechanical obstruction existed, and an operation was resolved upon. The account of the remainder of this case we give in the words of the author as translated into the Edinburgh Journal.

Operation.—After the patient was placed on a convenient table, we examined accurately the situation of the hardening, and determined on opening the abdomen at the outer edge of the right rectus muscle, about two inches above the navel. After dividing the integument with a common scalpel, and making a small opening in the peritoneum, I introduced my finger, and with a blunt-pointed scalpel divided the peritoneum on it so as to make it correspond with the external opening which was between two and three inches. I then besmeared my hand with oil, and carried it into the abdomen in order to feel for the indurated part. Scarcely had I introduced my hand, than an attack of the pain came on, and a portion of the intestines was protruded through the wound, which was immediately replaced by my assistant. On continuing the examination, I discovered, in a transvere portion of the ileum, a foreign substance just where the hardened intestine was to be felt. I drew the intestine out in order to examine it more minutely. The intestine was neither inflamed nor expanded, but it contained in its cavity a soft, coherent, and compact mass, which at its upper part, was somewhat compressed, and thus felt harder than the rest. So far as I could follow this part of the intestine, this contained matter was to be felt. I also here immediately detected an intus-susceptio; but in spite of all my efforts, I could not reach the commencement of it so as to bring it out. Two modes of proceeding were open to me in order to remove the intus-susceptio, either to make a transverse incision in the integuments from the right to the left side, or to open the intestine itself. The last mode seemed to me the most advisable, both because the patient was already very much exhausted, and because the operation would be sooner completed. The intestine was opened at the end of the discovered intus-susceptio, and immediately a part of the strictured intestine came into view. I introduced my finger into the opening in the intestine which was made about two inches in length, and gradually pushed the intus-suscepted part back from the right to the left side, whilst I gently drew that part of the intestine which contained the intus-susceptio towards me. By this means I fortunately succeeded in unfolding the entangled intestine, which amounted to two feet in length. There was not the slightest trace of inflammation, nor anything unnatural to be discovered in the part; there was merely a round worm which was situated in the upper part of the intus-susceptio. Of the mercury which had been employed, I could not find any remains, although I examined the duodenum and stomach; afterwards also there was no trace of it seen. The intestine was brought together by means of six spiral-form stiches after the manner of the glover's suture,* and the end of the silk was allowed to hang out of the external wound in the abdomen. The integuments were

* This suture (sutura pelliorum, suture des pelliors, and in German die *Darmor Kürschnernath*) is almost solely employed in wounds of the intestines. A very fine thread is always necessary for this suture, and in this case fine silk was used. Ed. of Ed. Med. J.

brought together by four interrupted sutures (Knopfrath,) dressings were laid over these, and lastly a bandage similar to Monro's bandage was applied. The patient was put to bed, and received some chicken-broth. After the operation no medicines were given, but we confined ourselves merely to regulating the diet of the patient, which for the few first days consisted of gruel and chicken-broth alternately changed. The colic pains left the man immediately after the operation, and he had a natural evacuation on the night of the 21st and 22d. On the 4th day the bandages were removed on account of their tightness and the distension of the abdomen. The wound had a very good appearance, being only a little red; the discharge was moderate. On the 8th day the wound was nearly closed, excepting at the lower part, where the silk hung out of the abdomen; the sutures were this day removed. From this time the patient mended daily, was quite free from pain, and on the 14th day he was completely cured, and continues well up to the present time. I endeavoured to pull the silk away, but in vain, and in six weeks after I cut away the portion which hung out of the wound, and left the remainder to its fate.

Mercurial Fumigation.—This mode of using mercury in syphilitic, rheumatic and other cases, has been recently employed by Dr A. Gibson, staff surgeon in India with very great success. We extract two of his cases, and give the formula and mode of employing the fumigation.—

Doon Sing, Sepoy, admitted into hospital, with syphilis, on the 17th of February. A phagedenic chancre, of a most obstinate and threatening nature, was the most difficult primary symptom to treat. The usual mercurial course was followed by general pains, and all the untoward symptoms denominated 'anomalous.' Unsuccessful trials were made of the alteratives considered the most active,—such as oxy. mur. hydr., pil. hydr., sarsaparilla, ipecacuanha, alone and in many varied combinations with opium; blisters, liniments, cupping, frictions, and bandaging, were long and ineffectually used. He was bedrid, and his general health greatly impaired, from suffering and want of rest, when mercurial fumigations were resorted to. He is, (August 21st,) after fourteen applications, walking actively about the hospital, complaining only of a sore mouth, and very slight stiffness of the ankle-joints; which, considering the dampness of the season, is not to be wondered at.

October 27th.—Perfectly well.

Goordat Sing, Sepoy, admitted, with venereal, on the 28th of February. The early history of this patient is very similar to that of Doon Sing. The secondary character which this disease assumed was so much the more formidable, however, from swellings that from time to time appeared on different parts of his body. The principles of the treatment were the same. The following were the prominent symptoms and appearances in the beginning of August, when mercurial fumigations were used:—General health greatly impaired; bowels irregular; appetite bad; habit emaciated; occasional nocturnal attacks of fever, with intense thirst; constant lassitude and listlessness; considerable enlargement of the os calcis; swelling of the digital extremity of the middle metacarpal bone, and a bump on the spine of the scapula: these enlargements acutely sensible to the touch. As the system became affected, after a few fumigations, all external marks of disease began to vanish; the pains, from the first, became blunted; and, after seven days use of the remedy, he had no complaints. At present (August 21st,) he is active and supple, and, but for the inclemency of the season, would be on the convalescent list.

October 27th.—Stout and well.

Observations.—Having professed obligations to the native practice of mercurial fumigation, and adduced examples in support of its sanative efficacy, I shall now mention the composition which is in use in this corner of India, either for adoption in all its crudeness, or to benefit by the improvement of the more cultivated judgment and systematic experience of others.

Quicksilver ʒiij. = 1 iola.
Litharge (*moordarsing*) ʒj. ℈ii = ½ iola.
Red lead (*sendoor*), ʒiij.
Sulphate of copper ʒss.

The whole is well triturated together, for about two hours, with a quantity of the leaves of a jungle plant (*shetur*,) till formed into a mass, which is divided into fourteen portions, each the size of a small nutmeg, for use. One of these being laid on a small bit of tile, this is placed on live [*burning*] cow-dung, in an earthen dish, on the ground, between the patient's legs, who, in a sitting posture is enveloped in a blanket. In about half an hour, the operation is over, the mercury being volatilised; and it is usual to employ this morning and evening.—*Lond. Med. & Phys. Journ.*

Use of Turpentine in Puerperal Fever.—Dr Kinneir, has published a paper on this subject in which the good effects of this practice are very strongly stated. This remedy has many strong friends, and many opponents. We extract Dr K.'s mode of precribing it.

The mode of administering the ol. terebinthinæ in one-ounce odses, as tried by Professor Hamilton and others, is, in my opinion, an injudicious one. From one to two drachms of the rectified oil in mist. amygdal. or with an equal quantity of syrup and an ounce of distilled water, in the form of a draught, should be exhibited after bleeding and purging, every three or four hours, until a considerable abatement of the pain and other symptoms take place. It will be rarely requisite to repeat the draught more than two or three times. Should the symptoms return, the medicine may again be resorted to. In this manner the remedy has been frequently prescribed by myself and others, with the happiest results. The above draught, in general, has seemed to relax the intestines, or at least, to sustain the cathartic operation produced by preceding remedies. It has been but rarely rejected by the stomach. In every instance of puerperal fever, fomenting the abdomen with tepid oil of turpentine, is (I think) adviseable, as I have frequently known females express, in the most forcible terms, the extraordinary and almost instantaneous diminution of pain which they have experienced from its application.—*Ibid.*

The following is a curious case, and has some bearing on the disputed question of the effect of the mother's imagination on the fœtus in utero. It at least shows that a very remarkable mutilation may take place in the womb. If any cause had affected powerfully the mind of the mother, the believers in the effects of the imagination would find a strong fact in this case.

Case of a Fœtus, in which the left Foot was separated from the Leg during Utero-Gestation.—By—Watkinson, Esq. Surgeon, &c.—On the 29th of last December, I was called to attend Mrs ——, residing at ——, aged twenty, who was in labour, having been married in April preceding. Soon after five o'clock, I made my first examination, and found the membranes entire; there had been some trifling flooding, but not of consequence. Labour went on slowly until seven, when the membranes gave way, the head came down, and the child was expelled, in a natural way, about half-past seven; when I discovered that the left foot had been amputated a little above the ankle, and the part nearly, but not quite, healed, in consequence, perhaps, of the bones protruding. The child was alive, and gasped for twenty minutes, when it expired. The mother said she had only gone seven months, which perfectly agreed with the appearance of the infant. On examination after the birth, I discovered the foot in the vagina, which I brought away: it also was nearly healed, but here likewise the bones protruded. There did not appear to have been any extravasation of blood from the limb, as far as I was able to judge. This foot (the left) was much smaller than the other, which was rather turned inward: it showed no marks of putrefaction, and, from comparing the two, I am led to suppose that it must have been two months separated from the body. There was not the slightest discoloration of the foot, which was in a state of perfect preservation.

The mother says, she was not frightened, nor did any unpleasant circumstance occur in the family during her pregnancy, to give her the least uneasiness. The husband is a journeyman, and by his industry they live comfortably, without her having to use more exercise than is actually necessary in a well-regulated family. *Ibid.*

Treatment of Cynanche Trachealis.—The general symptoms of *croup*, the extreme danger of the disease, the frequent inefficacy even of the most active and best directed treatment, and the striking appearances on dissection, are familiar to every practitioner. There is one fact, however, in the history of this disease, which has not as yet been noticed by authors on the subject; and one means of treatment, which has been repeatedly successful in my own hands and in the hands of those from whom I first received my information of its utility, which, I have reason to believe, has not come into general use.

The fact to which I refer is, that the exudation of *fibrin* very frequently commences on the surface of the *tonsils*, thence spreads along the arches of the palate, coats the posterior surface of the velum palati, sometimes surrounds and encloses the uvula; and at last descending, covers the internal surface of the pharynx and œsophagus, the larynx and trachea. That this is the frequent progress of the fibrinous exudation I am convinced, from the careful and repeated observation of the phenomena during life and upon dissection.

What is of much more importance, however, than the observation of a pathological fact, is the ascertained efficacy of a means of cure for this disease. Not merely have I repeatedly found the application of a solution of *nitrate of silver* completely successful in removing the fibrinous crust covering the tonsils, velum, and uvula, but I had been led to attribute the rapid alleviation and ultimate removal of all the other symptoms to this remedy; even in cases in which, from the severity and peculiar signs of the complaint, I had no doubt that fibrin had already exuded from the lining membrane of the larynx and trachea.

The solution which I employ is *a scruple* of nitrate of silver in an ounce of distilled water. By means of a large camel-hair pencil, this solution is to be freely applied once or twice a day, according to the severity of the symptoms, to the whole lining membranes of the fauces. The surface of the tonsils, or wherever else the fibrinous crust is actually in view, will, of course, be particularly attended to; but I do not hesitate to push the pencil to the lower part of the pharynx.

This remedy, so far from being productive of any irritation, beyond the mere mechanical and temporary one attending its employment, uniformly alleviates the symptoms of croup; such as the difficult respiration, the barking cough, and the peculiar anxiety of the little patient. It has evidently such an effect upon the diseased surfaces, both those which it actually touches and those which are continuous, as to induce them to throw off the false membrane by which they are covered, and, it appears, also to prevent the further progress of the exudation.'—*W. Mackenzie, And. Prof. Anat. and Surg. at Glasgow, in the Edin. Med. Journ. Ap.* 1825.

Neuralgia cured by the External Application of Belladonna.—John Gale, hospital-serjeant, 66th regiment of foot, thirty-nine years of age, delicate, subject to inflammatory attacks, went to bed on the night of the 2d of March, 1824, quite well. He awoke with a strange pulsation and tingling over the *right* eyebrow, which soon increased to a sensation of heat and soreness, and at length to a most extraordinary pain, extending across the temple, and shooting down the cheek. This was attended with an involuntary constriction of the eyeball, and a copious effusion of tears. The focus of the pain appeared to be the supra-orbital foramen of the os frontis. The paroxysm lasted two or three minutes, when there was an interval of partial, and sometimes of complete ease, for five, six, or ten minutes; then the same symptoms recommenced, and, after four or five hours of alternate torture and comparative happiness, the disease ceased; the forehead and temple, however, remained numb, and tender to the touch, the day after.

On the eleventh day, about ten grains of the extract of belladonna, moistened with a little water, were rubbed over the *right* eyebrow, for about three minutes, during a violent paroxysm. The result was, an instantaneous abatement of the pain: it returned, however, in half an hour; but on that night, (the *twelfth* from the first attack,) the patient slept better, and had fewer and shorter fits of pain than on any preceding one since the commencement of his illness.

The same application was repeated on the next night, and with similar good effect; on the fourteenth night there was an intermission; on the fifteenth the medicine was again used, and the patient passed the night tolerably well. The disease continued to yield; and finally, in *three* weeks, (that is, we presume, at the end of *one* week from the first application of the belladonna,) the man was quite well.

Since that period (now thirteen months) the disease has returned two or three times; the attacks, however, were mild, and always yielded to the same application.—Mr HENRY, *Assistant-Surg. 66th Regt., in Lond. Med. & Phys. Journ.*

Antidotes for Opium and Prussic Acid.—Mr Murray recommends the acetic acid in the first instance in cases of poisoning by opium. This is not advised by Orfila. We extract cases in which the antidotes were tried.

Mr JOHN MURRAY has published in the last number of the Edinburgh Journal of Science some 'Researches' on these articles, in which he says, 'I have no hesitation to pronounce with most positive certainty, that in *ammonia* will be found a complete antidote to *hydrocyanic (prussic acid,)* and in *acetic acid* an effectual counterpoison to *opium*.'

Half a drachm of hydrocyanic acid was given to a healthy young rabbit: the effects were prompt; respiration became laborious and difficult, with a grating in the throat; the eye lost its brilliancy; the head dropped; it raised a sharp cry, and was convulsed. Strong *ammonia* was dropt into the animal's mouth, and it was repeatedly wetted with a sponge dipped in *ammonia*. It almost instantly revived, and even licked repeatedly the finger which sometimes applied the ammonia, apparently quite sensible of the instant and continued relief it afforded. The animal effectually recovered; its lips were excoriated by the ammonia.

Two and a half drachms of *tincture of opium* were given to a rabbit. In a short time the eye became more opaque, the pupil dwindled to a mathematical point, and was insensible to the stimulus of light; the head fell to the floor; the breathing was laborious, difficult, and loud, and there supervened a total prostration of strength. *Acetic acid* was then administered through a quill, and applied to the mouth on a sponge repeatedly; the head was also bathed with *acetic acid*, and it was also applied to the extremities, and in the direction of the spine. The whole quantity of the acetic acid used was about a fluid ounce; the animal was also frequently roused, and finally kept warm: it effectually recovered.

These experiments were repeated with uniform success on other rabbits. Several days have elapsed, and they continue in the most healthy condition.—*Edinburgh Journal of Science.*

Caution with respect to the Use of Stramonium.—Perhaps we may be excused for cautioning surgeons againt the two free exhibition of this extract in the form of *suppository*, in cases of painful diseases of the rectum. An hospital surgeon of celebrity in this metropolis prescribed two drachms of the extract of stramonium, to be made, with some other ingredients, into six suppositories; one to be put up the rectum occasionally, when in much pain. One was accordingly introduced,—it dissolved, and was entirely absorbed: the patient became affected with symptoms closely resembling delirium tremens, and nearly died.—*Med. Chir. Rev.*

Extirpation of the Uterus.–The operation for the extirpation of the uterus has, since the beginning of the present century, been performed in Germany no less than six or seven times. The first of these operations was (in 1808) successfully performed by Osiander in Gottingen, on a woman from whom he had, seven years before, removed a cancerous tumour of the uterus.

In 1813 the operation, or rather only the removal of a tumour from the *cervix* uteri, was performed by Professor Rust of Vienna, but unsuccessfully, as the patient only survived eight days after it. In 1817, Langenbeck extirpated a *prolapsed* uterus, and with success. In 1822, Santer performed the still more difficult operation of removing an *unprolapsed* uterus, and since that time the same operation has been attempted in Berlin, Hanover, and Vienna. Of these attempts, two at least were unsuccessful—the result of the third is not yet published.

This operation, though of late years revived, is not one of modern invention. In *Sue*, (*Hist. des Accouch. Par.* 1786,) we find an account of the extirpation of the uterus having been successfully performed as early as the year 1560, by Andreas à Cruce, physician and professor at Venice. Nay, the removal of the prolapsed uterus was successfully effected twenty years before that period (in 1540) by one Carpus; and, in the beginning of the seventeenth century, the same operation was also performed by Zacutus Lusitanus. In the same author also (*Sue*) are to be found several other cases, both successful and unsuccessful, of this operation, which prove that it is not one of modern date.

These accounts, however, are not very explicit, and contain neither a description of the operations, nor a very accurate statement of the circumstances under which they were performed; and it is to Osiander, undoubtedly, that the merit belongs, of having improved this part of surgical science, and of having first systematically described the manner in which the operation should be effected.—*Edin. Med. Journ.*

Laceration of the Uterus in Parturition.—In the years 1819–20–21, 8600 patients were delivered in the Lying-in Hospital of Dublin, and of this number *twenty* suffered *laceration of the uterus.*

Of these twenty cases, *five* occurred in women parturient with *female* children, and *fifteen* in women parturient with *male* children. The *sex* of the infants, therefore, would seem to have a considerable influence in the production of this accident—a circumstance doubtless connected with the greater *size of the head* in the generality of *male* infants.

Thus, of sixty *male* and sixty *female* infants, born at full time, and examined by Dr Clarke, the averaged circumference of the *head* in the former was found to be *fourteen* inches, and in the latter only *thirteen and five-eighths;* and of 120 infants examined by the same physician, the circumference of the head exceeded *fourteen inches and a half* in six only, all of whom were *males.*

From examination after death, it would appear that the *neck* of the uterus is the part most frequently lacerated, and that the rent is generally in a transverse direction.—Vide *M'Keever on Laceration of the Uterus, &c.* Lond. 1824.

Wounds received during Dissection.—Mr Shaw, of Great Windmill Street, in a recent communication on this subject, strongly urges, from personal experience and from observation, the adoption of a *stimulant* plan of treatment in cases of this nature, in preference to the *depleting* system, hitherto so generally adopted; and adds the following interesting remarks with reference to the prevention of injurious consequences from such accidents occurring in dissecting-rooms:—

'Every student, on commencing dissection, is much alarmed when he cuts or scratches his finger; but in the rooms in Great Windmill Street this fear soon ceases, and of late years serious consequences have rarely occurred. This exemption

I attribute to the bodies being now invariably injected with a solution of *nitre* and *salts* (*bay-salts*) previously to their being dissected. If the part is not to be preserved as a *dry* preparation, there is not a single objection to the use of these salts, while the advantages, independently of the effect which it seems to have on the morbid poison, are considerable. Indeed, it is now common for students to keep a body for eight or ten weeks; and even after this time there is scarcely any smell, and the muscles of the limbs appear fresh and florid.

'Previously to our practising the plan of injecting bodies with the salt solution, very serious consequences frequently resulted from pricks or wounds, and particularly in spring, when the students had become a little enervated from the effects of a winter in town.

'The only cases that have occurred during the last three or four years have proceeded from the dissection of the ligaments, after the limb had been kept for some time in water, or in preparing bones that had been macerated; being, in short, the only occasions on which the student is subjected to putrid matter not corrected by the solution of *nitre* and *bay-salts*'.—*Lond. Med. Journ.*

It is proper to add, that the use of *saline* solutions, as here recommended, has been objected to on the grounds of their destroying the edges of the knives employed in dissection; and ardent spirits (*whiskey*, for example,) has been, it is said, substituted in America with great advantage.—*Lond. Med. Repos. & Review.*

Note on the Structure of the Nerves, read to the Academy of Sciences, Paris. By M. Bogros.

Reil, to whom we are indebted for almost all that we know of the structure of the nerves, had demonstrated that they consist of two distinct parts, the neurilema and the pulp; and he pointed out the manner in which both may be satisfactorily shewn. By means of dilute nitric acid, the neurilema may be destroyed; and the medullary threads will be observed crossing each other, and anastomosing in the form of real commissures, which may be compared to that of the optic nerves. Bichat, who traced these threads to a considerable extent, had remarked that their direction is very variable, owing to these anastomoses, so that those which, at one place, were superior, became, at another, either central or inferior. A different manner of experimenting, undertaken by Reil, confirmed the results of his former researches. After plunging the nerves into an alkaline solution, he observed that the pulp was destroyed, the neurilematic envelopes remaining empty, and presenting a multitude of canals communicating with each other, giving them, according to M. Béclard, the appearance of a reed.

The researches of anatomists had led to no more precise knowledge than this, when M. Bogros commenced his inquiries; from which inquiries it seems to result, that besides the neurilema and pulp, there exists a central canal. By the aid of tubes somewhat resembling those which are employed in injecting the lymphatics, but having a much finer extremity, M. B. attempted to inject the nervous fibriles. The experiments were performed in both living and dead animals, and preliminary preparation was found to be unnecessary to their success.

When a nerve is punctured by the properly prepared point of a tube filled with mercury, the injection traverses all the fibriles furnished by the nervous chord, to their remotest extremities, and may be traced even into the papillæ of the skin and mucous surfaces, in the muscles, &c. The injection proceeds also towards the origin of the nerve; and, even when introduced into a single fibrile, it passes into several others, by means of the canals of the anastomoses which exist in the commissures, of which we have spoken.

If, after this injection has been made, the nerve be divided, a round and regular opening may be seen in the centre of the pulp. With attention, also, and without any previous injection, an obscure point may be observed, in the centre of the pulp, after a transverse section of the fibrile. This is the opening with which M. Bogros has concerned himself: upon placing the point of the tube here, the nerve is injected.

When the nerve is deprived of its neurilema by means of nitric acid, the same results are obtained, proving incontestably, in M. B.'s opinion, that the canal is open in the pulp. When, on the contrary, the pulp is removed by means of an alkaline ley, the injection, under the same pressure, proceeds badly—it is frequently arrested, and presents not the same regular and cylindrical aspect as is observed in the other circumstances of the experiment. Finally, if the essence of turpentine be injected into the nervous fibriles, and these be afterwards dried, the canaliculated structure then becomes manifest to the eye.

The mercury also traverses the fibriles of the great sympathetic, and there demonstrates the existence of canals similar to those in the nerves of animal life. From the fibriles the mercury passes into the ganglions, and out of ganglions into other fibriles. Thus the injection pushed into the inferior cervical nerve traverses the cardiac nerves until it arrives at the heart, and from the great sympathetic it passes into the semilunar ganglion and the fibriles proceeding from it.

When the injection reaches the ganglions, they are seen to swell, and to assume the appearance of a multitude of small tubes opening into each other, and folded and contorted upon themselves.

The injection of the intervertebral ganglions presents peculiar appearances. At first they swell, afterwards the injection penetrates into the venous reticulum, situated between their proper surface and the envelope furnished them by the dura mater, and thence into the veins of this membrane itself. Finally, the injection is seen passing through the roots of the nerves, and falling into the cavity of the dura mater, owing either to the easy rupture of the pulp at this part, where it is very soft, or to the existence of natural openings in it. The injection cannot be made to pass into the roots of the spinal nerves; and, consequently, it cannot reach the spinal marrow. Of the injection which has passed into the veins, some globules have been found as far as the right auricle of the heart. But none of the mercury was ever detected in any of the arteries or lymphatics.

The anastomoses take place by the conference of the medullary canals and the confusion of the pulp: towards the point where the anastomoses have place, the nerve increases in volume in the ratio of that of the two fibriles forming it. The injection has been performed in the nerves of living frogs: when it began to be introduced, convulsions ensued in the muscles which receive their fibriles from the points which contained the mercury: when it was finished, there was a complete paralysis, which was not increased by dividing the nerve.

The preparations thus made could not be preserved, because the nerves, in drying, became contracted and horny, and expelled the mercury from their cavities.—*Revue Méd., Mai* 1825.

Cases of Diabetes. By Professor FRANCESCHI.

CASE I.—John Boreschi, aged 57 years, came into the hospital on the 20th April, 1820. He said that he had been ill for a month. He attributed his complaints to mental causes, after which an erysipelatous inflammation attacked his knee. This inflammation gradually disappeared: but he soon afterwards began to lose flesh, to complain of dryness of the lips, gnawing sensation at the stomach, which was painful on pressure, and when he took warm aliment; inextinguishable thirst;

abundant discharge of urine, depositing a copious sediment; vertigo; and a harsh dryness of the skin.

April 22d.—Symptoms as above. Pulse feeble and slow. (*Pure opium, four grains in the twenty-four hours; substantial food; two pounds of wine; four pounds of barley-water.*) 23d.—(*Opium, six grains; the rest as before.*) 24th.—Urine nine pounds, milky, and sweet. (*Opium, sixteen grains in the day.*) The thirst being more intense, his drink was increased to six pounds.

25th.—The urine is decidedly saccharine: pulse slow and feeble. He has had one stool every two days, as before. (*Opium, twenty-four grains in three boluses; the same quantity of drink.*) 26th.—The urine is in less quantity, and its appearance less milky. (*Opium, thirty grains in six boluses—one every two hours; four pounds of water; spirit of wine, four ounces; simple syrup, three ounces.* 27th.—The urine is limpid, and in natural quantity. Hunger and thirst much less intense. (*Opium, thirty-six grains in six boluses—one every two hours. The same drink.*)

28th.—The urine equals the drink. (*Opium, forty-eight grains in eight boluses—two every four hours.* 29th.—(*Opium, sixty grains, in eight pills—two every fourth hour.*) 30th.—Three pounds of urine in fifteen hours. (*Sixty grains of opium, as yesterday.*)

May 1st.—The same quantity of urine as yesterday. (*The same prescription.*) 2d.—(*Seventy-two grains of opium, and four pounds of drink.*) No change. 3d.—(*Idem.*) 4th.—Three pounds and a half of urine. (*Opium, eighty grains. The same drink.*) 5th.—Three pounds of urine. (*Idem.*) 6th.—Two pounds and a half of urine. (*One drachm of opium. The same drink.*) 7th.—Idem. (*Idem.*)

8th.—The patient was considered convalescent: the hunger and thirst had disappeared, and the urine was natural. The opium was diminished to forty-eight grains; but, after two days, there was a slight increase of urine. Opium was again given, to the extent of sixty grains; but, after two days, was diminished to fifty. The quantity of this medicine was lessened five grains each day, and a strong decoction of bark was prescribed. On the 26th of May the patient was discharged, cured; and, one year afterwards, he enjoyed good health.

Case II.—P. P., aged 32, a farmer, came into the hospital of Lucca, on the 20th of January, 1820. His skin was dry, rugous, furfuraceous: countenance pale: body emaciated: mouth dry; tongue white in the middle, and red at the edges: appetite voracious; thirst insatiable: urine most abundant, insipid, and limpid. The patient attributed his illness to sleeping in damp clothes, while fatigued and perspiring.

24th.—Pulse small and slow; obstinate watching. (*Opium, six grains—one grain every three hours. Six pounds of barley-water, and three ounces of honey.*) 25th.—Pulse still languid; urine eighteen pints. (*Ninety drops of laudanum, and half a drachm of anodyne liquor, in mint-water and syrup of orange-peel.*) 26th.—Urine considerably diminished. (*Laudanum,* 120 *drops, in mint-water; anodyne liquor, three drachms. For drink, three pounds of water, with three ounces of spirit of wine, and two ounces of syrup.*)

27th.—The patient passed, by the mouth, four lumbrici: the pulse is enfeebled: the urine is increased. (*Laudanum and anodyne liquor, of each two drachms, in six ounces of mint-water, in divided doses.*) 28th and 29th.—Nearly the same treatment. The urine is more abundant: that passed on the 29th amounts to eighteen pounds.

30th.—The patient having passed several worms, half a drachm of calomel was prescribed in six doses, one of which was taken every two hours; and a dose of castor oil was thereafter exhibited. 31st.—Debility and nausea increase. (*Three grains of gamboge every three hours.*) Worms are passed both by the mouth and anus.

Feb. 1st.—Strength much depressed. (*Cinchona, with laudanum.*) 2d.—Worms again passed by the mouth. (*Castor oil, three ounces; thirty drops of laudanum at bed-time.*) 3d.—The urine exceeds, by several pounds, the weight of both the fluids and solids taken. Nausea and vomiting almost constant. The urine now presents all the characters of diabetes mellitus. (*Six grains of aloes every two hours.*) 9th.—Symptoms of worms again appear. The diabetes is unabated. (*Ten grains of Venice turpentine every three hours.*) 10th.—(*Two drachms of turpentine in infusion of chamomile, as an enema.*) 11th.—Urine is still saccharine. (*Two drachms of turpentine, and twenty-four grains of opium, in divided doses, during the twenty-four hours; double quantity of bread, meat, and wine.*) 12th.—The same state: eighteen pounds of urine. 13th.—Idem. (*Two drachms of turpentine, and half a drachm of opium, in the twenty-four hours.*) 14th and 15th.—(The same prescription.) 16th.—(*Half a drachm of opium in the twenty-four hours.*) 17th.—The urine diminished. (*The same prescription as yesterday.*) 19th.—Diminution of the urine. (*Idem.*) 21st.—Nausea; pulse weaker; the quantity of urine augmented. (*Pure opium, forty-eight grains in the twenty-four hours.*)

22d.—Worms are passed by the mouth: nausea: loss of strength: augmentation of the urine. (*Opium, thirty-six grains.*) 23d.—Urine diminished. (*Sixty grains of opium in the twenty-four hours.*) 25th.—The quantity and quality of the urine natural. (*One drachm of opium in the twenty-four hours.*) 26th. —The patient goes on well. (*Idem.*) 27th.—Urine natural: the hunger and thirst diminished. (*Same prescription.*)

From this time the patient's health, flesh, and strength returned. The opium was gradually diminished; and he was discharged, cured, on the 7th of March. A year afterwards he was reported to be in good health.—*Professor Franceschi's Work on Clinical Medicine.*

Case of Cæsarian Operation.—By Dr SCHÖNBERG, of Naples.

ELIZABETH HUGH, twenty-eight years of age, of very short stature, and when a child affected with rickets, had for several years past been subject to very severe attacks of convulsions, and on the 7th of August, 1823, towards the end of her first pregnancy, labour-pains came on. At the same time she was seized with convulsions, which resisted every means I could try, and continued for thirteen or fourteen hours, wherefore I determined on delivering the woman. On a close examination, I found that the mouth of the womb was dilated, that the waters had escaped, and the head of the child was foremost, but that the pelvis between the rami of the ischiæ and pubes was extremely narrow, not more than two inches in width. Under these circumstances, I called in a physician-accoucheur, who found the woman in this state, but had not an opportunity of ascertaining if the child was alive or not; a circumstance which was to decide whether we should have recourse to the Cæsarian operation, or the perforation of the head of the child. In consequence of the uncertainty whether the child was alive or not, and the frequency of the labour-pains, we determined to wait till the following morning. August 8th.—The woman rested the whole of the night, and this morning felt considerably refreshed. In our examinations we could distinctly feel the motions of the child, which lay with the face foremost, and thus we decided on the Cæsarian operation, which was performed at two in the afternoon by H. Leuch, one of the Surgeons to the hospital. An incision was made in the course of the linea alba, from about an inch below the navel to the pubes, and with a second the uterus was opened when in a state of contraction, a labour-pain having occurred at this step of the operation. The fingers were then introduced, the opening in the uterus enlarged, and the placenta detached. The membranes were now ruptured, and the child in part removed from the womb; but just as the head was about to be withdrawn, the uterus contracted round the neck of the child, and it was with some difficulty that the head could be extricated. The intestines now fell forwards, and were obliged to be kept back by an assistant; the placenta was then withdrawn, but no arteries were secured, as the bleeding was very slight. The uterus was rendered as clean as possible, all the coagula being removed, and the parts were placed in their natural position. The integuments were kept together by means of sutures, and strips of adhesive plaster; and over these, compresses and a broad bandage were applied.

The child, when removed, was alive, since it moved, and made continued efforts, during half an hour, to breathe; but, notwithstanding all our efforts, it shortly died. The woman went on remarkably well; the lochial discharge appeared in the usual quantity; and, in forty-eight days from the operation, she was perfectly well.—*Salzburgh Medicinisch-Chirurgische Zeitung.*

Of the Preservative Treatment of Hydrophobia.—Dr Wendt, whose name is well known as a zealous contributor to the advancement of medical science, has lately published a tract in support of the preservative treatment, which has been adopted in the hospital of Breslau against this dreadful malady. The prophylactic measures pursued by Dr Wendt are the same as those which were first adopted at the hospital of Breslau, by Dr Kruttze, in 1797. These consist of the application of cantharides on the wound, of the internal exhibition of calomel, and of the external inunction of mercurial ointment, until salivation shall have produced ulceration of the gums. In support of the efficacy of this treatment, M. Wendt appeals to an experience of twenty-eight years, and to the guarantee of its success, which may be furnished by the most eminent physicians in that country.—*Darstellung einer Zweckm' assigen und Durch, &c.*

Of the Healthy Appearance of the Mucous Surface of the Digestive Organs. By M. Billard, M. D. &c. The conclusions which M. Billard deduces from his observations on this subject are the following:—

1st. The internal surface of the intestines offers certain differences of appearance, according to the age of the individual, and according as it may be examined during or after digestion; but these differences are only modifications of the colour, and of the natural texture of the membrane.

2d. The mucous surface is of a beautiful rose-colour in the fœtus, of a milky whiteness in early age, and of an ash-colour, or greyish white in the adult and advanced age.

3d. In individuals who have died during digestion, the mucous coat of the stomach and duodenum, and the commencement of the jejunum, is almost always slightly rose-coloured.

4th. It may be said, as a general result, that the mucous coat of the digestive canal is, when healthy, of a whitish colour, or white approaching to an ash-colour.

5th. The mucous membrane of the stomach never presents a morbid aspect in health, nor black or dark-coloured spots.

6th. The muciparous glands are either not apparent, or are so in very small numbers, at the internal surface of the stomach and intestines.

7th. These glands may be naturally developed in considerable number, without the health being injured.—*De la Membrane Muqueuse Gastro-Intestinale, dans l'état sain et dans l'état inflammatoire, &c.*

Variation in the Boiling-points of Fluids.

It has been known for some time, that when certain kinds of extraneous substances are introduced into heated fluids, considerable effect is produced upon the *boiling-point*, vapour being formed either at lower points, or with much increased facility. Thus Guy-Lussac has shewn, that metal filings thrown into *water*, heated in a glass vessel, lower the boiling-point of that fluid 2° or 3°; and Mr South pointed out the effect produced by putting platina wire, or slips of platina foil, into hot *sulphuric acid*, thereby causing it to boil readily, quietly, and at lower points by several degrees (in glass vessels) than it otherwise would have done.

Dr Bostock has recently observed a remarkable fact of this kind in the extent to which the boiling-point of *æther* may be changed by the introduction of a small chip of wood, a portion of quill, bits of glass, or other solid matter, perhaps, of any kind. *Æther*, in a glass vessel, boiled freely with him at 112° (Fahr.,) and with difficulty at 110°. On employing another glass vessel, it would not boil till the temperature had attained 150°, and this point was adhered to in other vessels.

On repeating the experiment, however, in a new vessel, the æther boiled earlier than before, but the vapour was observed to come off from one particular point, when some substance had adhered to the glass. This led to the introduction of a small *cedar chip* (a pencil paring,) when the wood was quickly covered with bubbles, and the fluid brought rapidly into ebullition.

In this way æther boiled at 102°, which, without the chips of wood, required 150°. The chips acted best when perfectly dry, and were not so effectual after some time as when first introduced. When completely soaked with the æther, they sunk to the bottom, and the ebullition nearly ceased, but the introduction of a fresh piece renewed it. Fragments of broken *glass* also lowered the boiling-point of æther considerably; and a small piece of *metallic wire*, or *copper filings*, thrown into this fluid at 150°, caused a sudden and copious explosion of vapour, and reduced the boiling-point many degrees. Plunging a thermometer also into hot æther caused the production of bubbles, at a temperature many degrees below the boiling-point, when no thermometer was present. After a time this effect ceased; but the instrument being removed for a little, its re-immersion produced a repetition of the same phenomenon.

Alcohol (*sp. gr.* ·848) boiled in a glass vessel at 182°, but by dropping in successive pieces of cedar-wood, the boiling-point was reduced as much as 30° or 40°.

The boiling-point of *water*, also, Dr Bostock found, was altered 4° or 5° by chips of cedar-wood dropped into it;—this fluid requiring a temperature of about 217°, when heated in a glass tube by means of hot lime, before ebullition took place, but being brought down to the usual standard (212°) by the introduction of a few chips.

Similar facts have been observed by other persons; and the knowledge of them has even been applied to practical purposes in this country, as by the keepers of steam-engines—with some of whom, when the *steam* fails, it has long been customary to throw into the boiler a quantity of the residue of malt, after the soluble part has been extracted (denominated *cornings*,) the immediate effect of which is the plentiful disengagement of vapour.

Professor *Oersted* also states, that he has employed a similar expedient (*experimentally*) in the distillation of brandy; and the result was, that *seven* measures of this liquor were distilled over with a degree of heat which otherwise would have only produced four.

We have ventured into these details, because we have no doubt that the principle here developed may be advantageously applied to the preparation of many medicinal substances, which are often injured by the degree of heat to which they are exposed in the laboratory.—Vid. *Ann. of Phil.*, and *Lond. Journ. of Science.*

Mode of preparing Moxa.—A preparation very similar to the Chinese moxa, and equally effectual, may, it is said, be formed by dissolving one ounce of *nitre* in a quart of water, and therein saturating some fine cotton wadding; which, being afterwards dried and divided into small parcels, is to be enclosed in paper cylinders, about half an inch in diameter, and one inch in height. This preparation burns, we are told, in a very slow and gentle manner, and only requires being kept dry to be at all times fit for use.—*Boyle on Moxa.*

Crystalline Lenses of Animals employed as Microscopes.—Dr Brewster, so well known to the scientific world, has lately suggested the employment of the *crystalline lenses* of animals as single microscopes; in cases where high magnifying powers are required, no artificial lenses which we can obtain being, as he says, either in their external form or in their internal structure, so perfect as those which we receive from the hand of nature. The crystalline lenses of *fishes*, from their superior density, which renders them less liable to injury than others, are, Dr B. says, the best adapted to this use; and the only precaution necessary in employing them is to place the lens so, that its optical axis, and the axis of vision in the eye of the observer, shall correspond, which may easily be done by adjusting the lens to a concave aperture in a small plate of metal, &c. A lens thus disposed will, it is said, preserve its transparency for some hours.

In cases where *high* magnifying powers are not required, the crystalline lenses of *quadrupeds* will, however, we may add, be found more convenient than those of *fishes*, as embracing a larger field of view, and as they are in general easily attainable, and often in situations where no artificial lens can be procured. A knowledge of this fact may frequently be of use to the naturalist.

Dr Brewster's observations are contained in the Edinburgh Journal of Science.—*Lond. Med. Repos.*

REVIEW.

Art. VIII.—*A Practical Essay on Diseases and Injuries of the Bladder, being that to which the Royal College of Surgeons adjudged the Jacksonian Prize for the year* 1821 *: irritable bladder is treated of in all its varieties, both with and without mucous discharges ; also inflammation, suppuration, and ulceration of that organ ; with Cancer and Stone, the formation of which last is explained on entirely New Principles ; Retention and Incontinence of Urine are considered very fully ; and the whole is prefaced by an inquiry into the mutual influence that exists between Life and Organization ; including some observations on ocular spectra and the nature of mind.* By Robert Bingham, Fellow of the Royal College of Surgeons ; author of Practical Essays on Strictures of the Urethra and diseases of the Testes, &c. &c.; and Lecturer on the Theory and Practice of Surgery. London : pp. lix. 467.

THIS is one of the many valuable essays on medical subjects which the patronage of individuals or societies has been instrumental in adding to our professional literature. This form of patronage has many advantages. It is permanent, or depends less on accident or caprice, than almost any other. The competition it excites is liberal, for individuals are not brought immediately into contact, where they themselves, and equally the public, are ignorant of the competition. There is secrecy in the compact, if such it can be called, between the unknown writer and the judges of his claims. Defeat is hardly an evil where it is unknown who have entered the lists ; and there will be left a better disposition towards a new trial, where the failure is as little known as the attempt.

Prizes for valuable discoveries have stimulated men to attempt what before they may have never contemplated, and a great deal of good has been done in this way. The mind, in comparatively advanced life, is addressed by similar motives with those which most powerfully affected it at an earlier period. It may again act with some of its original freshness, and upon subjects too which have more or less severely taxed its matured powers. It frequently does so, and hence the essays we speak of are not only valuable for their talent, but are more interesting than the mass of writings on strictly scientific subjects.

This form of patronage has long been known abroad. Count Rumford, our own countryman, established in England a munificent prize for discoveries in highly useful and practical departments in physical science, and we believe it was in the first instance awarded to one of our countrymen then living in London. We might name other patrons who have contributed to similar purposes abroad. There is in Europe a vast deal of voluntary patronage, which does not so much make occasions for its operation, as meets them when they occur. Grants of money and of rank, are made by kings and legislators to men who have contributed decidedly to the public good. Literature as well as science has been rewarded in this way. This sort of patronage has been one of the most honoured prerogatives of royalty, and the civil list has its sinecures of letters and science, as well as of veterans and favourites.

In our own country this patronage has been more limited. Our national policy, as well as the genius of our government, if they have not denied it to our rulers and legislators, have made them cautious in exercising it. But individuals have exercised it. Count Rumford should be especially named among those who have distinguished themselves and their country by this liberality: he made a similar benefaction for science here with that in England, and if the prize have never been awarded, it has not been that its objects are unimportant, or the proffered distinction unworthy of the labour. Our own profession has been patronized after a similar manner. In our own state a singular and honoured instance may be referred to; and if we abstain from naming the individual who so truly deserves our most respectful notice, it is from a motive he will as justly estimate, as we acknowledge ourselves to be governed by. Much that is valuable has been added to our medical literature by these prize questions. And the motive for future exertion has been made permanent, by the funds so liberally established.

Prizes for valuable discoveries, or papers on common topics in order to be useful should be derived from permanent funds. This is the case with those just mentioned. They are made in this way not merely lasting, but liberal endowments. They become the concern of a whole profession, and every part of a profession may in its turn be equally benefitted by them. When of temporary continuance or offered for single objects only, and for a limited time, the object itself is very likely to be of slight importance, and is not unfrequently designed to serve only some interested or personal views. We have in this country occasional benefactions of this kind, but we have not been often satisfied with the successful communications of candidates. The explanation of this is not difficult. The charity is not wholly to science. It is a purchase of something for the individual who makes it. And if it is very important to him to get communications, he will be pretty easily satisfied with what may be offered. Competition is thus narrowed, and it is not likely that the best men will be competitors. We are not disposed to discourage any attempt to advance good learning, but we have rarely thought the mode alluded to a good one. Instances are recollected indeed in which it has been productive of good. If we mistake not, Mr, now Sir Astley Cooper's premium was of this character, which was awarded to Mr Thackrah for his excellent essay on the blood. But such cases are complete exceptions to our remark. A great name, and a wide reputation is here concerned in the award, and will be jealous for themselves. The premium too is something more and something better than silver and gold; and they who enter for it, will be of those who can value it for itself as well as for what barely represents it.

Mr Bingham's essay begins with a preface of apology for the imperfections of his work. This is followed by a psycho-physiological inquiry, which however ingenious seems somewhat strangely placed. We have then some introductory observations, in which something is said of the structure of the bladder and of its functions in health and disease. The essay then properly begins. This inquiry is confined to diseases and injuries of the bladder. The limitation is a natural and a good one. The author has been strictly governed by it, and there was a large temptation to deviate. There is one circumstance arising from adhering to the letter of the question, which we have regarded as unfortunate, and which has rendered his work as a whole defective. His inquiry has not led him to notice the state of the urine, in the diseases of its receptacle. Now there are morbid states of the bladder which if not directly caused, are more or less affected by the urine. Mr B. has considered irritable bladder as a consequence of disease of the kidneys. It is the urine that is most affected by such diseases, and however the bladder itself may sympathise with the diseases of its secretory organs, the secretion itself cannot but have its effect on the state of the bladder. In its most healthy state, it is best stimulated by the most healthful urine. Its functions then only are perfectly natural. Morbid urine is not a natural stimulus, and the functions are disturbed by it. In other words a species of irritable bladder may exist which is caused by morbid urine.

The states of the urine have always been noticed by physicians. From the time of Bellini, and from long before his, down to our own, this fluid has been very carefully noticed in diseases. In the earliest, and for many succeeding periods, its most obvious and sensible properties attracted principal regard. The changes it underwent in colour, quantity, transparency, &c., in diseases, were studied in connexion with the diseases themselves, and particularly as it regarded stage and time. They were among important facts in the diagnosis, and the prognosis was especially helped by them. It was in the urine especially, along with other things it is true, that the evidences of *crisis* were looked for.

Later observations have been directed more to the chemical composition of the urine, and to its changes in disease. A great deal of very useful discovery has been made in this department of animal chemistry. Remedies have been nicely adapted for correcting such states of system as have favoured the production of morbid changes in the urine; while the condition of remoter organs has been learned from examination of the urine itself. Majendie, Berzelius, Rollo, Watt, Prout, Howship, Wilson, Scudamore, Bostock, and many others, have done much to elucidate the diseases of the urine and of the urinary organs. The relations of the functions of these organs, with those of the stomach and bowels, have been particularly studied, and a vast deal of very valuable practical discovery has been made concerning them. Among other diseases we shall refer to but one, the gout. The connexion of this with certain morbid states of the urine, and the dependence of both on the condition of the stomach and bowels, have been very satisfactorily traced in the course of these investigations. Mr Bingham's work however is confined to the diseases of the bladder, and to these we shall confine ourselves.

The first ninety pages of this volume treat of 'irritable bladder.' It is first described in its simplest form, and afterwards in the more complicated. Irritable bladder may be caused by disorders of the digestive organs; by ulcerations in the bowels; by disease of the kidneys, urethra, and by the prostate gland, strictly local causes. It may be attended with a discharge of mucus, and this may be caused by cold, and stone, though rarely; more commonly by irritation of some urine, being always retained in the bladder, according to Mr B., and by disorders of the digestive organs. Ulcerations of the colon or rectum may produce it, and so may diseases or injuries of the spine; stricture of the urethra, or diseases of the prostate gland. These causes of irritable bladder with symptoms, cases and treatment, occupy the first ninety pages of the volume.

'When there is no actual disease of the bladder itself, the most frequent causes of its becoming irritable are, diseases of the urethra, of the prostrate gland, of the uterus, of the vagina, of the rectum, of the anus, of the kidneys, cutting of teeth, and, lastly, disorder of the digestive organs.

'The treatment of the vesical affection proceeding from any of the above causes, is extremely simple, so far as the bladder alone is concerned, as it consists wholly in removing the cause; and, when that has been completely effected, I have never known a single instance where the irritability of the bladder has not entirely subsided.

'The means, of course, must vary according to the peculiar circumstances of the case; and these, most probably, will be best shewn by the recital of cases. It may, however, be mentioned here, once and for all, that when disorders of the digestive organs occasion irritability of the bladder, every remedy that has been known to benefit those organs, may occasionally become useful in the treatment of the irritable bladder.'—pp. 4, 5.

A case follows of a child five years old, who always wetted his bed, and clothes. This was entirely relieved by small mercurial purgatives. In adults this form of irritable bladder comes on slowly and is frequently very obstinate. The removal of the causes in these is not sufficient for the cure. Their effects are also to be removed. Cases follow in which great disorder, in the digestive organs in sedentary men, was accompanied with very distressing irritability of the bladder. The dyspepsia was kept up, though under medical treatment, by the quantity and quality of food; in one case by bran bread, wine, hearty suppers, &c. The diet was at last strictly attended to; this with an alterative purgative course, soon removed dyspepsia, and the affection of the bladder, gradually ceased. We make the following extracts from a case of irritability of the bladder caused by ulceration in the bowels.

'A gentleman, thirty-three years of age, and who commonly enjoyed excellent health, became affected with great irritability of his bladder. He had pains down his thighs, over the pubes, in the perinæum, immediately in front of the anus, an aching of the glans penis, and sometimes in one of his testicles. He was continually desiring to make water; and sometimes after emptying his bladder, he felt acute pain at the neck of that organ, shooting thence along the urethra, till it reached the corona glandis, and then it seemed to encircle the penis. His tongue was extremely furred, and his countenance betrayed irritation of the whole system. Sometimes he had no appetite for food, and at others there was an almost insatiable craving, particularly between breakfast and dinner, and at such times his urine was perfectly limpid, materially increased in quantity, and the desire to void it was urgent and incessant; under these circumstances it was that he always experienced most pain after evacuating the contents of the bladder. These symptoms clearly pointed out disorder of the digestive organs, and I expected as soon as this was rectified, that the irritation in the urinary organs would subside.'—pp. 18, 19.

Attention to the stomach however did not cure the bladder.

'This induced me to pay still more attention to the case. His fæces were examined, and when costive, they were of a natural and healthy colour, but some parts of them were covered with pus, which satisfied me there yet remained considerable disease in the bowels. He was often troubled with slight griping pains; and when his bowels seemed to move, it frequently gave him pain in the bladder, and near to the extremity of the penis. This I accounted for by supposing that there were ulcers in the colon; that when the fæces lay long in contact with those ulcers, they received a patch of pus in shape and size exactly corresponding to that of the ulcers; and when the peristaltic action of the intestines moved the fæces over the surfaces of ulcers, that it occasioned irritation, griping, and sympathetic pain in the urinary organs.

'I became still more convinced of the truth of this opinion afterwards, from finding that every thing which irritated the lower bowels, or brought away their mucus, increased the pain and irritability of the urinary organs. Pilula hydrargyri and the saline purgatives always aggravated the irritability of the bladder, if given in the smallest doses that would excite the bowels.

'The only aperients which could be used were oleum ricini, magnesia alba, manna, and very often it was necessary to combine tinct. opii with these, when there was more than ordinary irritability of the bladder. The tinctura opii was commonly recommended to be taken with a little oleum ricini; the manna or magnesia were usually given in the middle of the day, or about half an hour before dinner, and sometimes they were taken together; one or the other was occasionally preferred, according as it was found to operate the best upon the bowels, or according to the degree of acidity upon the stomach. He fed upon mild, nutritious, light food, and drank very sparingly of wine, and that of the lightest kind, and only a little now and then, just to keep up the tone of the stomach. He bathed the pelvis in warm water daily, and by the use of these means he got quite well in about three months.'—pp. 20, 21. 23.

Irritable bladder from disease of the kidneys,

Case.—'The patient has had great frequency of making water for several years, and sometimes this symptom exists to a most distressing degree; the desire is incessant, and the pain is not even relieved by the evacuation of the urine. The bladder is occasionally so irritable, that whether it be moderately distended with urine, or empty and contracted, the pain is equally great. Now and then there is a discharge of mucus from it. Red sand also frequently comes away with the water, and I have seen specks of blood in the mucus. There is pain and tenderness of the back, frequent sickness, and vomiting; pain near to the umbilicus, and pains sometimes in the bowels; pain near to the costa ossis ilii; burning pain in both groins; and pain down the insides of the thighs: these symptoms, together with the passing of red sand, certainly indicate disease of the kidneys; and, as they preceded the irritability of the bladder, I suspect the disease of the kidneys to have caused the latter; and, I am the more confirmed in this opinion, by finding that mild diuretics afford relief. It is true as will be hereafter shewn, that whenever the kidneys are affected so as to have their secretion diminished by their sympathizing with disease in the prostate and bladder, then also a degree of benefit is often derived from occasional doses of mild diuretics, but I do not think that it happens so decidedly in them, as it does in the present kind of cases. This patient's sufferings are very much influenced by the state of the digestive organs, and we may say that those organs are influenced by the state of the urinary system, so that medicines which benefit the digestive organs also benefit the urinary organs, and remedies which relieve the latter, also prove advantageous to the digestive organs. Saline effervescing draughts; small doses of magnes: vitriol:, pil: hydrarg: manna; and all the alkalies occasionally afford relief; and sometimes it is found useful to add light tonics, infus: gentian: comp:, infus: calumb:, infus: cascarillæ, dec: sarsaparillæ; but none of these medicines can be taken long together, so that a frequent change is rendered necessary. The contents of the bowels are often evacuated by means of warm water injections, and the severe pains are mitigated by tinct: opii c̄ solut: amyli. Small doses of the cubebs and bals: copaibæ are the diuretics which best agree; besides which all kinds of mucilaginous drinks are occasionally taken; and great comfort is derived by employing the hip bath, or immersing the whole body in the warm slipper bath.'—27–30.

The bladder may become irritable from disease of the urethra. Gonorrhæa is first considered in this connexion. In one case mild tonics, with warm bathing of the perinæum were found the best means of treatment. In a very severe case after an ineffectual trial of these and many other means, the case was cured by the use of a bougie covered with oil and a fourth part of balsam copaibæ. In these cases the gonorrhæa had been injudiciously treated. In a third irritability came on after a mild attack, which had been treated by the mildest means. This case resisted internal and external treatment, but was cured by the bougie. A case of stricture is next given, and in this case the bougie sensibly diminished the irritability. Irritable bladder from disease of the prostate has the following symptoms:

> 'The symptoms, which more particularly denote irritation in the prostate accompanying an irritable bladder are a sense of heat and fulness, or dull aching pain in the perinæum with occasional aching pain in front of the pubes, as though this latter part were pressed externally by some hard substance. In some instances, the finger in the rectum will discover the prostate to be enlarged; and if the gland be pressed, it sometime causes pain in front of the pubes; but it must be remembered, that considerable irritation may prevail in the gland without any enlargement of it. Should the prostate, however, be enlarged, then, very probably, there will be also a partial retention of urine, which may be the only cause of the bladder being irritable. This can only be known by introducing the catheter after the patient has used all his endeavours to expel his urine. Disease in the prostate operates directly, and indirectly, to produce irritability of the bladder; the direct effect takes place, when irritation is propagated, or continued, from the prostate to the bladder; and the indirect effect occurs, when some enlargement of the prostate merely prevents the complete evacuation of the urine, in which case the bladder grows irritable in consequence of the perpetual stimulus of the retained urine. This should be carefully borne in mind, because the treatment of these cases ought to vary according to the immediate cause of the vesical irritation. If the bladder suffer from partial retention of urine, that must be remedied by the introduction of the catheter as often as necessary.'—44–46.

Other symptoms are, disturbance of the digestive organs, furred tongue, and general irritation. A case is given of this disease, in which various medicines, and in sufficient quantity, were tried ineffectually, for during their use very little regard was paid to food and drink. These were particularly regulated by the author, and under a very mild alterative purgative course with mild tonics, and the application of warm water to the perinæum the patient recovered. Mr Bingham says, 'In short, with the exception of ordering him to bathe the perinæum, I directed the whole of my attention to improve the state of his digestive organs, and exactly in proportion as the tongue became clean and the digestion good, so did the irritation of the organs lessen.' We have quoted this to make a remark which has occurred to us in reading his book, that it is not improbable that in many of his cases, in which he ascribes the affections of the digestive organs to the diseases of the bladder, these last were in fact effects of the first. In making this remark we are not forgetful of the effects of diseases of the bladder even when slight; and even on these organs, that chronic stricture of the urethra, which has been so slight as scarcely to be noticed by the patient, will at times produce very severe forms of dyspepsia. There is one *local* cause of irritable bladder which is only glanced at by the author, but which deserves to be noticed. This is retaining the urine long after the natural inclination to void it has been excited. Mr Hunter says, 'a gentleman in perfect health, from retaining his urine beyond the inclination, in the play-house, had all the symptoms of an irritable bladder brought on, which continued several years, rendering him miserable.' Mr Bingham merely mentions the fact. The treatment we should recommend in such a case would consist in such mild tonics as have been found useful in other forms of irritability. The hip bath would doubtless aid much in relieving it. Preparations of camphor have been found very useful in such cases, and care should be taken of the diet, and of the bowels.

In the section on irritable bladder attended with discharge of mucus, Mr B. first speaks of the different states in which it may be met with, and then of the diagnosis. We make no apology for the length of the following extract.

'Mucus from the bladder is met with of four different kinds, or in four different states. Sometimes it appears much like jelly, adhering all round the inside of the vessel into which it is voided; and in one instance of this which I have seen, the mucus had a slight greenish hue, but in other cases it has been perfectly free from colour. Sometimes the mucus resembles pus so nearly, as to make it difficult to discriminate between them. A third kind is a glairy mucus, so thick and tenacious that the end of a stick entangled in it, will elevate the whole in the form of a thick rope. The fourth only differs from the latter in containing a quantity of earthy matter, which is sometimes so fine and white, as to have been compared to hair-powder, but I have seen it in rough particles about the size of mustard-seeds, and one or two pieces have been nearly as large as a grain of wheat: in this state it looked very much like old mortar. The best way to determine whether there be a morbid secretion of mucus from the bladder, is to observe the urine immediately after it is voided, whilst it remains warm, for when cold it often throws down a sediment which may be mistaken for mucus. If none but cold urine can be obtained, it should be heated to the temperature of the internal parts of the body, before observation be made upon it. If mucus appear under these circumstances, it will be more satisfactory, but, if the urine become perfectly clear, we are not thence to feel assured that it contains no vesical mucus, because I have seen urine that was clear both at the time of voiding it, and also after standing to grow cold, from which a deal of mucus separated and clung to the side of the pot so firmly, as to allow the urine to be poured away from it. Pus, I believe, may be distinguished from mucus by observing how it mixes with the urine. Pus seems to me both to blend more readily with the urine when they are stirred together, and to separate less completely than mucus does. To the best of my recollection, in every instance where I have had no doubt of pus coming away with the urine, the latter has always retained a milky or rather whey-like appearance. Sometimes the best mode of discriminating between the two, is to let the urine stand perfectly undisturbed for some hours in a cold place. Thus I have known a discharge from the bladder, which, when first voided, was so much like pus that I could not determine its nature, but which I was inclined to think pus, after standing a few hours assume so consistent a form, as to leave no doubt of its being mucus. The smell of vesical mucus will also often distinguish it.'—pp. 54–57.

From secretion of the prostate it may be distinguished by not having the peculiar mawkish smell of the latter—from its containing earthy particles,—from its rapidly becoming putrid and discharging much ammonia, and, from its being discharged only with the urine, whereas the prostatic secretion when formed in an unusual quantity, generally escapes externally along the urethra, as rapidly as it is forced out from the prostate.

'Mucus that is discharged along with the urine, very possibly may come from the kidneys; but when this happens it seldom appears in considerable quantity, unless it bears a great resemblance to pus. Precisely the same kind of mucus may be secreted by the bladder, therefore a correct discrimination may sometimes be difficult. We must be guided chiefly by other symptoms. If there be indications of disease in the renal glands more violent than the symptoms of disease in the bladder, and if they existed before those of the bladder, then we may be allowed to suppose that the mucus comes from the kidneys. But if the bladder was known to be diseased before the kidneys, then we may suppose the symptoms of disease in the latter to be sympathetic, and may conclude that the mucus comes from the bladder.'—pp 58. 59.

The causes of this disease have already been mentioned. In the treatment we are to allay irritability, and remove direct and indirect causes of irritation. Opium is the best remedy for the first indication, and may be given by the mouth, or may be injected into the rectum, or even into the bladder itself. Hip bathing is an important aid. The catheter should be employed, whenever so much urine has accumulated, as will render any further accumulation a cause of irritation. The digestive organs claim particular attention. All local means will be ineffectual unless these organs are restored to a healthy state. Mr Bingham makes some good remarks on the *uva ursi*, which has much reputation for checking mucous secretions of the bladder.

'The uva ursi' he says, 'appears to me to be useful only as a light tonic astringent medicine and when given with this view it has never failed to answer my expectation.' He gives it alone, or in combination with soda, or some neutral salt. Calumba and gentian he has used in the same way, and with similar results. The advantage of uva ursi is that it is not so intensely bitter as the article just mentioned.

In the next section we have the disease caused by ulcerations in the colon or rectum. This has been alluded to before. An interesting case is given of this disease. But it is too long to be extracted. It is a case of severe disorder of the digestive organs, some portions of which appear to have ulcerated. The first care of Mr B. was directed to disordered function, and upon examination of the fæces to ascertain their state after he had adopted and continued a course of treatment. He found them quite healthy in appearance, but he observed whitish yellow patches upon them, from which he inferred ulceration of some portion or portions of the canal. The strictest attention to diet continued to be paid, and this with the occasional use of pilula hydrargyri at night, and a mild laxative in the morning, was at length followed by recovery. When pus ceased to be found on the fæces, and mucus in the urine, the tone of the bladder was restored, and its irritability diminished by cautiously retaining the urine, until the natural quantity could be borne without inconvenience.

Three cases follow of irritable bladder with mucous discharge, in consequence of diseases or injuries of the spine. The affections of the bladder in these cases were the direct effects of disease in another part. They were among other serious symptoms exhibited by the patients. The digestive organs in all these cases suffered severely. The proper treatment resolves itself into the use of the best means for treating the spinal affection, and for restoring the digestive organs to order. We pass over the section on inflammation of the bladder, for it contains principally what is readily found elsewhere. We find one exception to this remark.

'I find,' says Mr B., 'no author to have mentioned the wild expression of the eyes, as symptomatic of cystitis, but as I once noticed it in a patient three or four days previous to his death, I consider it as indicating great danger; and on this account it ought to excite the greatest attention in the use of remedies, and will of course make the surgeon guarded in his prognosis. This case made the more impression upon me, because the gentleman who had care of the patient said he was doing very well—that the man was only frightened; and directed him to take a cordial medicine with confectio aromatica.'—pp. 91-92.

Retention of urine. This is an effect of disease, and if not relieved by art it generally proves fatal. When this is not the case, the bladder gives way, in the rectum perhaps, and the urine passes per anum; or into the perinæum, followed by fistula. Mr B. corrects the common construction of the expression, the *bladder gives way*. It is not true that laceration occurs from distention by retained urine. Mortification takes place in some small spots, and the opening through which the urine afterwards flows is made by the ulcerative powers which separates the dead from the living parts. Mr B. has met with two cases, at least, in which retention proved fatal, but in neither of these was there opening or rupture of the bladder. Coma occurs as an effect of retention before death, and the discharge of large quantities of frothy mucus from the lungs. Congestion may produce the fatal coma in some cases, but Mr B. feels convinced that in others death has been directly produced by suffocation, in consequence of the air cells of the lungs being filled with frothy fluid. We might stop here to inquire, how far the state of the lungs in these cases depended on disturbed brain; or whether the affection of the latter were an effect of the former. We are anxious however to avoid all discussions which might lead us from the main purpose of this article, which is to give our readers a condensed view of the practical parts of Mr B's book. We copy the symptoms of retention.

'Retention of urine may generally be known to exist, by there being a painful and urgent desire to make water, and violent, but ineffectual efforts, at intervals, to empty the bladder. There is tumor in the hypogastric region, and tenderness on pressure. The distended bladder may also be felt by a finger in the rectum, and if pressure be at the same time made with the other hand, above the pubes, percussion will be perceived. There is often accompanying fever, with a full, hard pulse. Sometimes there is an amazing determination of blood to the vessels of the head, and flushing of the face, and then I have always met with a peculiarly full, strong, rolling, and rapid pulse. In the latter stages of this complaint, patients are often comatose, and have slight convulsions; and, when not comatose they sometimes have vomiting and hiccup, which last symptom is very bad, as it commonly indicates mortification. The symptoms of fever are such as generally occur in common inflammatory cases, but having continued a certain time, they change to those which are seen in the worst stage of typhus, particularly the dark-brown dry fur upon the tongue, and the dry brown sordes upon the teeth and lips. These latter symptoms so generally prevail after the system has been for a certain time oppressed with some matter which ought to be evacuated, such as pus, fæces, or urine, that they have been termed symptoms of retention. Of course the violence of the fever will be very much dependant upon the strength of the patient.'—pp. 125, 126.

Of its causes, Mr B. remarks ;—

'These are of two kinds, either the want of expulsive power in the bladder, or some insurmountable obstruction that prevents the flow of the urine. The want of expulsive power may be either a total paralysis or mere loss of tone, in consequence of the detrusor muscles having been sprained. The mechanical obstructions may be numerous, such as spasms and inflammation of the sphincter vesicæ, or of the membranous part of the urethra; a coagulum of blood or stone in the bladder; a calculus lodged in some part of the urethra; strictures of that canal; diseases of the prostate gland, or some imposthume forming near the anus.'—p. 129.

Many sections are occupied with the treatment of retention, the author beginning with that which will be proper in the first instance, and proceeding to such as peculiar circumstances of difficulty may require. In the first place antiphlogistic measures are to be actively adopted. The only questionable part of this method is general bleeding. He thinks highly of leeches and cupping in the neighbourhood of the bladder, but except peritonitis be present, he is doubtful about venesection. If however the saving of time be a great object, on account of the violence of the symptoms, then venesection may be employed. A case is given in which forty ounces of blood were drawn in the first instance. Much stress is laid on warm bathing, and warm fomentations particularly about the region of the pelvis, perinæum, &c. Mild and active cathartics, and anodynes are an important part of the treatment. Some patients have derived more benefit from cold than warm bathing. Mr B. thinks there may be cases in which it will be particularly serviceable. In Marryat's Therapeutics it is stated, 'that the last resource is the immersion of the feet in cold water.' From the analogy of fever with the state of the system which not unfrequently attends retention, and from the beneficial effects of cold affusion in the hot stage of the former, the author thinks the same might be tried in the latter. He does not refer to the curative effects of cold locally applied in some forms of constipation, which would seem to have a still closer analogy to retention. In some apparently desperate cases of constipation, cold has been employed with astonishing success. From Mr B.'s observations of the effects of tinctura ferri muriati in retention, he is not disposed to recommend its use in this complaint. He thinks favourably of infusion of nicotiana as an injection, and says that it promises to be a valuable auxiliary in the treatment of retention.

The treatment of retention by instruments follows. This part of Mr Bingham's work is very valuable. He is very minute in practical directions, and shows the particular and comparative advantages of different methods with great simplicity and clearness. There is considerable novelty in his views. We mention this not that we consider it their principal recommendation. We are more obliged to him, and to all authors in our profession, who have devoted time and talent to the observation and study of what is admitted, however long it may have been, in its philosophy and practice, than to those who obtrude their strange tales into our studies, and trouble us with their vain philosophy. We have been amused with the effect of this love of the marvellous in some of our contemporaries, and if we had time could show it in instances sufficiently ludicrous.

Some remarks are offered in the first place on the pressure of the urine on parts which oppose its passage from the bladder. It may in this sense be regarded as an instrument, and at the first view as well calculated to remove an obstruction. This however as is known, is very rarely accomplished. Mr B. then mentions bougies and the occasional beneficial effects which have followed their introduction but a short way into the urethra. One case is quoted from Whately in which urine flowed freely although the bougie did not enter the urethra more than two inches. Bougies are further useful in preparing the way for the catheter. A case is given from Hey. The following is a note by Mr B. to this case.

'I think it likely that cases similar to the above might be effectually relieved by injecting warm oil into the urethra. This is said to be practised in Italy, and to succeed when the retention results from spasm of a stricture. Warm oil thrown into the bladder having in one instance mitigated violent spasms of that viscus, would lead us to expect it might have a similar effect upon the urethra. Those cases of retention which I have mentioned as having been relieved by only the *partial* introduction of a bougie, shew that if mechanical dilatation was the successful means, very little was necessary, and how can this be so delicately effected as by the injection of warm oil? But, if it was not the mechanical dilatation of the urethra which removed the spasm in these cases, then we must ascribe the success to nothing else but the effect of the oil or lard that was conveyed upon the bougies into the canal. We may readily believe that the irritation of an inflamed, contracted, dry urethra, would be materially lessened by the application of warm oil; or should this answer no other good purpose, it would probably facilitate the passing of an instrument subsequently, therefore at all events it is worth a trial.'—p. 157.

The catheter is the instrument on which most dependance is to be placed, and Mr B. has very fully described the instruments he prefers and the mode of using them. He first speaks of their use in retention caused by spasm or inflammation. He prefers the elastic gum catheters. The curvature he recommends is shown in a plate. He thinks the surgeon should confine himself as much as possible to one kind of curvature. The following are his directions for introducing the catheter.

'The proper mode of introducing a catheter is, to hold the concave side towards the patient's abdomen, while it is carefully insinated down the urethra, till its point has passed below the arch of the pubes, at which moment the operator, using no force, should gently carry his hand towards the patient's knees, and that movement alone will direct the point of the instrument properly till it enters the bladder. The catheter will pass the more easily if it be held lightly; for, however well the practitioner may be acquainted with the anatomy of the canal, the adroit performance of this operation depends upon such delicacy of feeling, and nice management, in accommodating the hand to the inclination of the instrument, that this may almost be said to guide the surgeon's hand, instead of being itself guided by him.

'If the canal is free to admit the catheter, and any difficulty occurs, it most usually happens in the bulb of the urethra, and is occasioned by the point of the instrument being pressed too much towards the rectum: when this is discovered, the catheter should be withdrawn a little away, and then be carried forward again, having its point so directed, as if trying to make it rub against the posterior surface of the pubes. If, after well-conducted attempts, it be ascertained that the urethra is closed against the catheter, it will be desirable to determine whether the obstruction results from spasm or inflammation. Should it be the latter, then venesection, or local bleeding, and warm bathing, ought to be employed, before again having recourse to the catheter. But if it be spasm, then an opiate had better be given, and warm bathing be recommended, prior to using the instrument."—pp. 161—164.

A caution is given against bleeding where the inflammation is of the irritative kind. Disease of the prostate is considered as producing retention more frequently than any other single cause. Enlargement of this gland may take place throughout its whole substance, or in either of its lobes. One effect especially deserving notice in this connexion, of its enlargement, is the alteration it produces in the course of the urethra. It deserves particular notice, inasmuch as any marked alteration in this course, must affect the introduction of the catheter. If the whole gland be enlarged at the same time, the curvature of the urethra upwards is increased. The same is true of enlargement of the middle lobe only. If a lateral lobe be enlarged, this obliges the urethra to pursue a winding course towards the opposite side. What besides its symptoms will assist us in ascertaining disease of the prostate?

> 'When an instrument will pass to and fro freely for the distance of eight, or eight and a half, or nine inches along the urethra, the retention of urine will then generally be owing to the valvular projection of the middle lobe of the prostate over the internal orifice of the canal; but if when the instrument has entered about seven inches and a half, it be impossible or difficult to urge it further, and when it has passed further, it be found equally difficult to withdraw, and if it be a bougie that has been used, and its point appear flattened at the sides, then there will be reason to conclude that the lateral lobes of the gland press firmly against each other, and so obstruct the flow of urine. This latter kind of obstruction usually comes on in consequence of inflammation of the prostate, and is indicated also by a great sense of weight, heat, and fulness, and perhaps aching pain in the perinæum, and about the pubes. Very often both these kinds of obstruction exist at the same time, for as that which results from the pressure of the lateral lobes against each other, may be brought on at any time by a sufficient degree of inflammation, so it is apt to take place when the valvular projection of the middle lobe exists already. Inflammation may, indeed, be the cause of the valvular obstruction, for although the middle lobe of the prostate be morbidly enlarged, it may not be sufficiently so to obstruct the flow of the urine; but if it become inflamed, then the increase in size that necessarily follows, makes it shut up the urethra completely.'—pp. 169—171.

The use of the inflexible catheter is first stated. The more this instrument is curved the easier will it pass the diseased prostate, but the more difficult will be its passage through the membranous portion of the urethra. At times it is necessary to use an instrument so much bent that it is very difficult to get it along to the prostate, and where the increased curvature of the urethra will allow it to pass readily. In such a case Mr B. assisted the passage of the urethra by pressing one hand against the perinæum, whilst with the other he put more of the instrument down the canal. He is disposed to think if the practitioners be thoroughly acquainted with the operation, a catheter which passes readily the healthy urethra will pass it when diseased. The instrument will at length stop, being pressed against the posterior part of the urethra, by the increased curvature of the urethra upwards as before mentioned. What is to be done? The surgeon is to depress the end of the catheter he holds in his hand. This gives him command of the part of the instrument, which is raised by depressing the opposite extremity. The hand of the operator is to move as if he were desirous to hook the pubes on the catheter. By these movements the instrument will fall into the route of the urethra, and enter the bladder.

The next section treats of the use of flexible catheters in disease of the prostate. We quote the following entire as any abridgment would have diminished its value.

'The great superiority which the flexible catheter has over all others, is, that by using it upon a strong stilet, we may give to it any degree of curvature we please, and when it has been partly introduced, we have power to vary the curvature, if necessary, while it remains in the urethra. The alteration in the shape is accomplished by moving the stilet to and fro within the cannula. So long as the stilet remains pushed quite home within the cannula both will of course retain the same degree of curvature that has been imparted to the stilet previous to its introduction; but when the stilet is a little withdrawn, it increases the curvature of the cannula, and at the same time produces a flexible point, both which effects are often extremely desirable; for, supposing it possible for the instrument to have been a little misguided, it will then, if the point be rendered flexible, have an opportunity of finding out the way for itself; and if any obstruction be met with on the under surface of the canal, the curvature of the cannula being increased the moment before it arrives at the impediment, it is enabled to glide over it, being thrown more closely against the opposite side of the urethra. The two qualities just described, make the flexible gum catheters preferable to all others in cases of retained urine in consequence of enlargement of the prostate gland, because it is in such diseases that the greatest degree of curvature is required. It has been noticed that the degree of curvature necessary to be given to the point of inflexible instruments to enable them to mount over the valvular projection of the prostate sometimes renders it difficult to pass them along the membranous part of the canal; the flexible gum catheters seldom encounter this difficulty because no increase of curvature is required before they have gone through the membranous part, and it can be given to them at the critical moment when it is wanted; at which time, if necessary, a greater degree of curvature may be imparted to the flexible catheter, than what, if communicated to an inflexible one, would allow of its being introduced to that part where it would prove useful.'—188—190.

Self-bending catheters. A flexible gum catheter which has long been retained on a stilet very much curved acquires a disposition to assume the same shape after having the stilet removed from it. This is a self-bending catheter. This instrument has many advantages over others. Mr B. has some views regarding this instrument which he thinks are novel, and deserve notice.

'If one of these self-bending cannulas be placed on a stilet of ordinary curvature, and the stilet be withdrawn about an inch or an inch and a half; if the catheter be then screwed round the stilet, that part which projects beyond the stilet will be seen to describe a circle of an inch, or inch and a half in diameter; because being unrestrained by the stilet, it naturally inclines to bend agreeably to the disposition which it possesses to remain curved.

'Precisely the same effect may be produced upon this instrument in the urethra, and thus we may obtain a catheter with a point possessing any degree of flexibility we please, and the power of turning it in every possible direction to find out and penetrate any unnatural windings of the canal. Suppose one lateral lobe of the prostate has enlarged more than the other, it diverts the urethra from its natural course, and makes it take a turn towards the side opposite to that of the enlarged lobe. Sometimes the middle lobe enlarges so much in its centre as apparently to divide the urethra right and left. Under either of these circumstances, that manner of using the instrument which has been just described, appears likely to find out, and carry the catheter through the turnings of the canal.'—pp. 206–7.

This section closes with recommending the introduction of the finger into the rectum as almost indispensable when a flexible catheter is employed without a stilet, or when, as in very small catheters, the stilet happens to be a very weak one. He lays but little stress on this when using the inflexible instrument. Some very useful remarks occur in the next section on the importance of attending to the length and size of the catheter. The amount is that an instrument should be selected of the largest diameter that can be introduced, 'and, as to length, whenever the retention results from disease of the prostate, the catheter had better be at least twelve inches long.'

The three next sections are on the use of bougies; the force to be employed in introducing instruments into the bladder, and the position of the patient during the operation. On the first Mr B. adds very little to what had been previously said by Mr Hunter on the same subject. With regard to the second it seems more force may be used than an inexperienced person might feel disposed to apply. The position must be the most convenient for the surgeon. It would seem that standing erect before him is the most convenient.

The treatment, after retention has been removed by the catheter, deserves much attention. If costiveness, inflammation, or spasms have been among its causes or attendants these all deserve the care of the practitioner. 'But' says Mr B. 'the subject which more especially demands consideration in this place, is the treatment of the bladder, to prevent the recurrence of retention.' This is not to be delayed. The question is will the bladder probably perform its office perfectly, after having suffered, let the cause, degree or continuance, have been what they may; especially is this to be looked for in the graver diseases of the bladder or urethra? This question may be safely answered in the negative. The organ is not left ordinarily if ever in a state to empty itself after so much disturbance as has demanded instruments. Another question then arises. If it is most probable that the catheter may be again demanded, and it may be in a very few hours, shall it remain in the bladder, and the urine be removed when required, or shall it be successively introduced as circumstances may demand? From the evidence on this very interesting question, advanced by Mr B. and from his own views on the subject, we should be disposed to recommend with him the first course. This is certainly adviseable in one case, viz., where the patient is at a distance from the surgeon, and it is found impossible to instruct the patient or attendants to introduce the instrument. It is equally so in another, where the difficulty of introducing it is very great, increasing the distress of the patient, and the difficulty itself increasing by the necessary repetition of the operation. Cases will and do occur in which however desirable it may be, the patient cannot bear the continued presence of the instrument in the urethra. Such are cases of great irritability of and about the prostate, and the same may be true of the bladder itself. When however it can be retained, it must be secured against being thrown out of the bladder or drawn into it. Mr B. directs the following:

'Different contrivances have been adopted for this purpose, but the following appears to me the most simple, and every way the most convenient. Fasten some very strong silk or sewing thread (nothing better than dentists' silk,) three or four double, by tying it properly to the rings of the catheter, so as to make two bows of the thread, each about two inches long, and on opposite sides of the catheter. The instrument being introduced, the bows of thread will pass along the sides of the penis; a strip of emplast: adhesiv: is then to be passed through these bows, and afterwards made to encircle the penis several times. It must be passed round the penis so lightly, that it shall form no stricture upon it: the security to be derived from it must result entirely from its adhesive property. By this method, not more than half an inch of the instrument need project beyond the extremity of the urethra, and the penis will allow of being turned about, as may suit the convenience of the patient. So long as it may be an object to preserve the bladder empty, the end of the catheter must be kept open, and some vessel must be placed to receive the urine constantly as it flows off. If the patient rest on the back, then a urinal may be placed between his thighs, having the penis bent down into it; but if from any cause,

> he be compelled to lie on his side, then some other plan must be adopted. If it so happens, that some difficulty occurs in keeping the end of the penis in the vessel which is placed to receive the urine, a piece of tape or narrow strip of linen had better be attached to the end of the catheter, and be extended thence into the urinal. This, well managed, answers very effectually to preserve the bed dry. Supposing, however, that the wearing of the catheter is only necessary to guard against enormous and sudden accumulation of urine in the bladder, then the patient may have a small brass stopcock fixed on the catheter, or he may use a plug, which he can take out and replace at his own pleasure.'—pp. 239—240.

The returning power of the bladder is to be learned by the efforts of the patient, and his success in expelling every drop of the urine. When this can be done the catheter may be given up, but not before.

It sometimes happens that the means now enumerated fail, and the patient is placed in the utmost hazard by unyielding retention. Some other passage than the natural is to be found for the urine, and this must be an artificial one. Puncturing the bladder is now referred to. This operation has not been very successful. It has not been resorted to for the most part till after failure of all other means, and the patient's situation already desperate can hardly be made worse by any operation. Bad symptoms are both local and general. They may be caused by inflammation of the bladder and peritoneum, and all the phenomena of these appear ; along with these, remoter parts as the brain, stomach, bowels, &c. may suffer. We may have then coma, hiccough, obstinate vomiting of morbid matter, acute pain in the abdomen, and perfect constipation. These symptoms may proceed from retention. There can be no question in such a case what should be done, if the bladder cannot be relieved by the natural passage for the urine. The situation of the patient is more or less desperate according as the above symptoms are more or less severe, and have continued for a longer or shorter time. Where shall the operation of puncture be done? Mr B. has the following, which we quote in answer:

> 'There are three points at which we may perform the operation of puncturing the bladder; *viz.*, from the rectum or in the perinæum, or, thirdly, between the pyramidales muscles, above the pubes; and under particular circumstances each may deserve the preference. Should the prostate gland be so much enlarged as to prevent the bladder being distinctly felt from the rectum, the operation then is inadmissible, either from the bowel or the perinæum; it must in such cases be performed above the pubes. On the other hand, if the bladder be contracted, and do not distend sufficiently to rise above the pubes, then one of the other two places becomes the

fittest for the operation. If, indeed, it be likely the patient will require to void his urine for a long period through the artificial opening, then, as a cannula must be worn constantly during the whole time, the operation above the pubes is always to be recommended if practicable; but if there be reason to suppose that the natural passage will shortly be restored, and the bladder can be distinctly felt from the rectum, we ought to puncture there, for the operation per anum is the least difficult, least painful, affords all the relief required, and occasions the least trouble till the urine again flows through the natural passage. It sometimes happens that retention of urine, occasioned by a stricture, may be relieved by cutting into the urethra behind the stricture; if this have been unsuccessfully attempted, the operation of puncturing from the perinæum, ought to be performed, but under any other circumstances I conceive it will always be preferable to operate either from the rectum, or above the pubes.'—pp. 248, 249.

We beg to refer to Mr B's book, and to other practical treatises in surgery for the modes of performing these operations.

The urine may be retained by pus, mucus, or coagulated blood in the bladder. A fatal case of the last may be found in Hunter on Venereal. Mr B. after Sabatier, recommends in these cases that a syringe should be attached to the external end of the catheter, by which means mucus, &c. may be drawn away. The catheter should of course be of the largest size. Sabatier writes, 'ce procédé a été mis en usage avec le plus grand succés dans des cas qui paraissaient déséspérés.'

Sometimes a calculus passes from the bladder into the urethra and being obstructed there produces retention. If indicated venesection, opiates, warm bathing, cathartics are in the first place to be employed. If after all this, the stone still keep its place, what should be next done? According to Mr. B. something will depend on the situation of the stone. If in the prostatic part of the canal, he recommends pushing the stone back into the bladder, in preference to cutting down upon it. There is no immediate danger of course from this. If the stone have not entered the canal favorably at first, it may when it enters it again. Should this happen, and the stone advance beyond the prostate, let attempts be made by artificially dilating the urethra if it can be done, and by Sir A. Cooper's urethral forceps to remove the stone. If these means fail, cut down upon the stone and remove it, observing to make a free opening, which shall in no respect be valvular, but which will allow the urine to escape freely. If the stone have passed so far as to be covered by the scrotum Mr B. recommends that it should be pushed back to the perineum that the scrotum be not wounded.

Urine may escape from the bladder and be effused into the cellular membrane. Sometimes this gives rise to urinary fistula, at others mortification takes place, and is fatal. If a stricture be cause of retention, ulceration may take place behind the stricture, and effusion be the consequence. Ulceration however takes place in other diseases than stricture. It has occurred in the prostate, and then all the urine that gets into the cellular membrane passes through the prostate.

'Urine in the cellular membrane is mostly first discovered at that part where the scrotum joins the perinæum, for, although the effusion may have begun much farther back, it seldom produces swelling enough to attract notice, or any discoloration of the skin, before it has advanced sufficiently forward to get beyond the fascia of the perinæum, which terminates at the root of the scrotum.

'If the patient has smarting in the perinæum at every attempt to urine, and this smarting seems to increase at every subsequent attempt; and if upon examination there is found tumor and discoloration in the perinæum, then we may be sure that urine is being extravasated into the cellular membrane.

'The treatment of these cases consists in making a free incision into the tumefied parts, in order to give a free vent to the pus and urine, and thus to prevent further mischief taking place. This end will be the more perfectly attained in proportion as the incision can be carried near to the point at which the effusion commences; but, if there be retention of urine, and after laying open the swelling the urine gush out, and the bladder be readily emptied through the opening which has been made, we may then rest satisfied with the operation. On the contrary, if the urine do not escape freely, the surgeon should introduce a catheter, and if it encounter a stricture, then, guided by the instrument, the incision should be carried if possible a little beyond its point; but, if there be no stricture, the patient should be made to void all his urine through a catheter passed into the bladder, and retained there, by which further extravasation will be prevented.

'Should the urine have been very extensively diffused into the cellular membrane of the scrotum, prepuce, groins, abdomen, &c., then, beside laying open the perinæum, as already described, it will be necessary to scarify the other parts, and to press the urine out of them as much as possible.'—pp. 286—288.

The local treatment should be simple, combining the greatest cleanliness with the least irritation. The constitutional treatment must be directed by the precise character of the symptoms. We pass the sections on suppuration, ulceration, scirrhus, and cancer of the bladder. The next is on incontinence of urine. This will not detain us. Care should be taken that actual retention is not mistaken for incontinence. This may happen during paralysis of the bladder. The surgeon may always assure himself of the disease, by examining the hypogastrium. If there be a large tumour here, occupying the place of the bladder, notwithstanding urine may be dribbling away, retention is the disease, and not incontinence. The catheter will remove all doubt. Sometimes children have the disease during dentition, and sometimes adults have it from costiveness or other disorders of the digestive organs. At times it occurs in consequence of want of power in the sphincter vesicæ and muscles of the urethra. At others, and especially in females after severe labour, incontinence is owing to loss of substance of the bladder. The treatment will be varied according to the causes. Want of muscular power has been best obviated by cantharides; and loss of substance by mechanical means, under the use of which, the bladder being kept empty, new substance is formed, the opening filled up, and a natural cure made of the incontinence.

We here must take our leave of Mr Bingham, though we feel we leave much valuable matter unnoticed. We refer particularly to the sections on stone and lithotomy. One affection of the bladder he has not noticed, and we know no one who has particularly described, or even alluded to it. It is a very distressing affection of the bladder produced by sudden check of the catamenia. It has been mistaken for, and described as some affection of the uterus. It is however seated in the bladder. We may hereafter notice this affection in a distinct article.

Art. IX.—*A Practical Treatise on Hæmorrhoids or Piles, Strictures, and other important diseases of the Rectum and Anus: being, with some additions, a treatise, to which the Jacksonian Prize was adjudged by the Royal College of Surgeons.* By George Calvert, Member of the Royal College of Surgeons of London, and of the Medico-Chirurgical Society, &c. London, 1824. pp. 359.

THIS volume contains seven dissertations on a certain class of diseases, some of which are the most common which are met with in practice. Notwithstanding their frequent recurrence, they do not seem to be always well understood by practitioners, and one obvious reason for the obscurity, which has attended their pathology is truly stated by Mr Calvert, 'it is the great and often insurmountable difficulty that obtains to a proper examination of the parts in which they are seated.' Every practitioner of any experience will be able to appreciate the amount of this difficulty—but we believe that every candid one will also be ready to confess, that the fault is sometimes on his own side—on this subject we might easily enlarge, but we prefer to give some account of Mr Calvert's opinions and practice.

The subject of his first chapter is Hemorrhoids. The following is his account of the local symptoms of the disease.

> ‘ The first attack of hæmorrhoids is generally very slight, and is not preceded by any marked constitutional derangement. There is some sensation of weight or fulness about the sacrum, and extremity of the rectum, extending, perhaps, to the perineum ; and the sensibility of the bladder, urethra, &c. is sympathetically increased. This state continues for a short time, perhaps for two or three days, when in many cases a slight flow of blood takes place during the expulsion of the fæces, and smears their surface of a bright red colour. This flow never occurs in some individuals, particularly during the primary attacks ; but when this is the case it forms, as it were, a crisis to the complaint, and the above-mentioned symptoms disappear at an earlier period.
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> ‘ After a greater or less interval the same train of symptoms are generally renewed, but in a greater degree, acquiring strength by repetition. The sensations of weight, tension, &c. are more perceptible ; some sympathetic phenomena are observed ; the blood is discharged in greater quantity, and tumours of varied size begin to appear within or around the anus.
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> ‘ These tumours are preceded by a peculiar stinging or pricking pain, which increases as they dilate, and is generally much aggravated by the pressure of the sphincters. Sometimes blood oozes from their surface, or is squirted out through small apertures when at stool. On other occasions they remain dry, or they are moistened by a whitish serum, exhaled from the surface ; but in either case, after a short time, they collapse, presenting, when they have been often distended, so many flaps of skin, forming, when external, a projecting and serrated margin to the anus.’—pp. 8, 9.

The constitutional symptoms are too common and well-known to need any detail.

In the next section he considers the question of the source of the hemorrhoidal discharge, which he decides to be from the exhalents, for the following reasons.

> ‘ First, The kind of pain and pulsating sensation that precede and accompany the discharge sufficiently indicate, that there is an increased action in the capillary system of the part. Secondly, The manner in which the constitution sympathises is analogous to what takes place, when in other cases the functions of the part being preternaturally increased, it becomes, as it were, a focus of vitality, exciting or diminishing the natural tone of other organs, with which, from the laws of the economy, it is more especially associated, giving rise to functional disorder, which is more or less intense, ac-

cording to the influence that has been exerted, and the state of the general health. Thirdly, The discharge is of a florid red colour, resembling in every respect arterial blood; and if attention be paid, when, by an effort, the inner coat of the rectum is protruded, it will be found to exude from the surface, producing an appearance similar to that which occurs when too much force is employed in filling the vessels of the same part with minute injection. Fourthly, The discharge is generally followed by an abatement of pain, heat, &c., which are the usual attendants of preternatural excitement in a part. It is also frequently preceded and followed by an exhalation of a serous nature, which proceeds from the same source, since the change of colour is gradual from white to florid red, and *vice versa.*

'In many cases the blood flows for a short time, and the discharge is not renewed until the next attack, but on other occasions it is only observed when the fæces are expelled, or the parts are thrown into false action from irritation, as in tenesmus. The fæces are found smeared with blood, but it is only superficial; there is no intermixture of this fluid with the fæculent matter.—pp. 12—14.'

Mr Calvert next offers some remarks upon the supposed advantage of this discharge and the danger of checking it—he supposes the opinion to have some foundation in truth, but like many others of this kind to have been much abused. Our own opinion on this point of pathology is this—That this disease in common with a variety of others is usually an effect, which is palliative or remedial of some antecedent derangement, and that it is improper to obstruct the operation of natural remedial processes, without instituting other and better ones. Now it occasionally happens in these cases that the original derangement is incurable and that the natural remedy is the best and the most agreeable that the case admits of; in such instances it is clearly absurd to attempt the removal of the secondary disorder. Where the original disease on the other hand is curable, it is certainly most judicious to attack that in the first instance—leaving the consequential one to future operations, if indeed it is not removed with its antecedent. In other words the cure of these vicarious disorders is too often dangerous or difficult merely because it is begun at the wrong end. Illustrations of this opinion cannot but suggest themselves to the mind of every one who is conversant, not with the treatment of hemorrhoids only, but of the thousand symptomatic affections which vex the dyspeptic, the hypocondriac, or the subject of obscure organic disease.

We come next to the consideration of the appearance and structure of the common hemorrhoidal tumour, the account given of this by Mr Calvert is quite different from that contained in many popular works and is probably the correct one.

'There are two kinds of hæmorrhoidal tumours, differing very materially, both in their appearance and structure. The first that I shall speak of are by much the most common, and constitute what are commonly termed piles. They are first seen in the form of small fleshy tubercles, generally of a browish or pale red colour, and situate within the anus, or descending from the rectum. On examining them with the finger, they are found to have a somewhat solid and spongy feel, and, when cut into, present a surface more or less compact, and bloody, from which blood oozes, leaving the texture pale, and more relaxed.

'When these tumours are more external they are paler, and generally, also, more elastic and transparent; appearances which arise from the nature of the skin that covers them, and the serum with which their internal tissue is often infiltrated. These are sooner produced, and disappear more rapidly than the former.

'These tumours very often contain a central cavity, filled with fluid, or coagulated blood, which is of a brighter or darker red, according to the length of time it has been effused. The lining of the cyst is either smooth or granulated; and by the assistance of the microscope in the dead subject, after having forced into the arteries by which they are supplied with blood some fine and coloured injection, a few minute vessels may be traced, through which the fluid gradually exudes into the above-mentioned cavity, but there is evidently no connexion whatever with any of the larger vessels.

'This cavity is usually small, not exceeding the size of a pea, but it is sometimes large enough to contain several drachms of blood.

'More generally, however, there is no regular cyst, but the substance of the tumour is infiltrated with blood, which eventually becomes dark and coagulated. This blood does not appear to be the result of common extravasation, since it is not generally diffused, as in ecchymosis, but confined in separate patches of different shades, presenting a variegated aspect when the tumour is cut into; on closer examination it appears as if it were contained in dilated vessels, which traverse the tissue in the direction of the long axis of the rectum, so that, if the tumid part be divided longitudinally, they present numerous dark streaks through the substance, but, if the section be made transversely, small, roundish specks only appear.

'The manner in which the common hæmorrhoidal tumour forms is in general pretty uniform. The patient is first made sensible of its development by a peculiar pricking, stinging sensation, generally within or around the margin of the anus; and, on applying the finger to the part, it is felt slightly elevated, as if some newly-formed substance were forcing its way to the surface.

'The increase of these tumours, when once they have become in some degree permanent, does not take place in every direction; they elongate rather than expand, the body being usually of a conical form, and larger than the neck, which arises probably from their relative position with the surrounding parts. Sometimes more or less blood is exhaled from their surface; on other occasions a serous fluid only is exhaled, or they remain nearly dry; but in either case they generally disappear in a short time, and return again at an uncertain or regular period, increasing in size, and becoming firmer in texture with each repetition.

'The discharge of blood takes place in two ways. First, It is exhaled from the surface, as in other cases, when it proceeds from the mucous coat of the rectum. Secondly, When either a false or natural effort is made, and the tumours are forced down, and grasped by the sphincters, a small quantity of pure florid blood is forced out in a fine stream from one or more points; and, on examining attentively the part from which it issues, several small orifices may be discovered on the body of the tumour, which is now considerably softer than before.

'After some portion of blood is evacuated, or the local determination of fluids to the parts has ceased, the tumours collapse, leaving as many pendulous flaps, formed of the distended cutis. If the tumours have been small, or of recent formation, these flaps are either scarcely observable, or they disappear in a short time; but, under opposite circumstances, they are more conspicuous, remain stationary, and, where the tumours were external, form a projecting and indented margin to the anus.

'When, however, they have been strangulated for some time by the pressure of the sphincters; when they have been repeatedly gorged with fluids, or their usual mode of dispersion is prevented by other causes, either local or constitutional, these tumours, acquiring more solidity, become permanent, varying but little in size at different times, and forming a source of almost constant pain and inconvenience, in being protruded, inflamed, ulcerated, or, what is very common, by inducing a troublesome and distressing prolapsus of the anus.

'This permanent state of the tumours is owing partly to the developement of the capillary vessels, gradually obliterating the interstices; and, in part, to the effused blood coagulating, and becoming organized; and hence the production of the condylomatous tumours, and the foundation of that irregular mass, which is found around the anus in those who have been long subject to hæmorrhoids, commonly termed the hæmorrhoidal excrescence, all of which are permanently solid, and can only be removed by the knife or the ligature.

'Occasionally these tumours attain an enormous size, arising chiefly from a large quantity of blood being effused into the central cavity, and in some degree also to the great increase in the thickness of the cuticular envelopment. Schmuker states, that he was called to a gentleman, who had some hæmorrhoidal tumours, of which one was as large as the fist: he extirpated them with the knife, and his patient speedily recovered. Serum is also sometimes effused in considerable quantity through the tissue of the tumours; but I am not aware that it is ever collected together, as in the other case, and indeed, whenever the increase is both rapid and great, we may conclude, that the bulk of the tumour is owing to an accumulation of fluid or coagulated blood in the centre.

'Such are the general character and structure of those swellings, commonly called piles, and which the generality of practitioners consider, though erroneously, to be nothing more than dilated veins.'—pp. 22—28.

The other kind of tumour is described under the name of hemorrhoidal varix.

'These tumours are very rare, compared with those already described, and differ so materially in many respects, that were it not they are sometimes combined, and somewhat analogous in point of situation and causes, they could not be classed together with any degree of propriety. In general they may be known by their progress, appearance, &c., and the distinction, in reference to the surgical treatment, is of the utmost importance.

'This state of the veins is seldom ascertained until it has made some progress; for the distention is effected in a slow and gradual manner, without any of those sympathetic affections, which are more or less conspicuous in the development of the common hæmorrhoidal tumours. There is not that disposition to enlarge at certain periods; and although they may sometimes inflame, this state is the immediate effect of mechanical injury; it never takes place spontaneously.

'With respect to their physical properties, it may be said, that they are generally of a dark or bluish colour, soft and elastic to the touch, resembling, in this respect, the ripe grape; and when compressed by the finger they become sensibly less, but return to their former state as soon as the pressure is removed.

'The form is also very different from that of the true hæmorrhoidal tumour; being broader at the base, rounder, and sometimes distributed in irregular and ill-defined clusters, like similar affections of the venæ saphenæ; they show no disposition whatever to bleed, unless ruptured or cut into, and when once formed they increase gradually, or remain nearly stationary through life.

'No judgment can be formed by the position, since these, as well as the common hæmorrhoidal tumours, are usually found at the very extremity of the rectum; but it may be presumed, that the tumours are of this nature when several being crowded together in this part yield readily to the finger, and may be traced to some extent up the rectum; for the true hæmorrhoidal tumour is generally external, and almost invariably quite within reach of the finger.'—pp. 39—41.

It is evident that the diagnosis between the two species is of the utmost importance, since the treatment proper for the first, might be followed in the case of the second, by fatal hemorrhage. Both species however may sometimes exist together.

'As these tumours often arise from the same causes as the preceding, and occupy precisely the same situation as many of the former, it is natural to conclude, that in some cases they may exist together. Now the inspection of dead bodies proves that this is the case; that the hæmorrhoidal veins being rendered varicose, their extremities are either afterwards imbedded in that kind of spongy substance, which has been stated to form the bulk of the common hæmorrhoidal tumours of long standing; or that the cellular tumour being formed, the veins become dilated in consequence.

'In the former case, which, however, is very rare, the tumours are almost invariably situate about the verge of the anus, or immediately within the grasp of the sphincter, and if the finger be introduced high up within the rectum, the true varices may perhaps be discovered. If these are felt, we may then conclude, that varices have existed from the first, and the same precautions, in respect to puncturing or extirpating them, are requisite, as where the case is of a more simple nature; but if, from examination and attention to the history and progress of the complaint, there is reason to conclude that the extremities only of the hæmorrhoidal veins are dilated, and that this dilatation is chiefly a consequence of mechanical causes, as the constriction, &c., of the sphincter acting upon the other tumours, no danger need be apprehended.

'In the latter case, too, the distended veins, forming, in size and colour, a distinct and beautiful contrast may often be traced through the fine skin about the verge of the anus; but, in by much the greater number of these, it will be found, if occasion offer for accurate inspection, that the dilatation is merely local, produced by the causes already alluded to, and that the substance of the swelling is chiefly referable to another source.'—pp. 45—47.

Another important difference between these two species of tumour is that the first is much more subject to inflammation than the latter, becoming in such cases exquisitely painful, and occasionally destroying themselves by excessive action, the hemorrhoidal varix on the other hand yields too readily to be subject to strangulation and mechanical injury, the most common causes of severe inflammation in the proper pile.

Mr Calvert sets down as predisposing causes of hemorrhoids 'the peculiar situation of hemorrhoidal veins; hereditary disposition; a disordered state of the digestive organs; age, sex, and climate.' The exciting causes are 'a torpid state of the bowels, fasting, sedentary habits, violent passions of the mind, irritation from worms in the rectum, from drastic medicines, excessive venery, &c.'

We have some hesitation about admitting some of these. The last especially is a point concerning which the evidence must always be doubtful, and we know no good theoretic reasons in favour of the affirmative. It may operate indirectly by inducing digestive and constitutional disorder, but not in any other, so far as we know. Mr Calvert does not think 'a costive state of the bowels so frequent a cause of hemorrhoids as is generally supposed' as 'in many cases the action of the bowels has been uniformly regular, or more active than usual.' Though according to our own observation, costiveness usually attends hemorrhoids, it has seemed to be rather a cotemporaneous effect of the same cause, than the cause itself—at least we have not been disposed to attribute so much to the mechanical effect of fæcal accumulation, as is usual. It has appeared to us that torpid or irregular circulation in the system of the vena porta was intimately connected either mechanically or by sympathy with the formation of the tumours.

In the treatment of hemorrhoids, Mr Calvert considers attention to diet the first and most important consideration. On this head however, he does not pretend to lay down any particular rules, and therein, we think gives evidence of his good sense and observation. We are daily more and more convinced of the difficulty of framing any system of dietetic maxims, which shall be even tolerably applicable to individual cases. We agree with our author that 'in this respect, the patient must have recourse to that which he has found by experience to agree with him, and which, if possible, without the aid of medicine, will preserve his bowels in good order.' He objects to the use of purgatives especially those of the resinous kind in this disorder, and to that of hot liquids and stimulating injections—but recommends the use of cold water in cases, where the hemorrhoidal disease is not the consequence of torpid circulation. This last is one of the most efficient palliatives within our knowledge—though it must be admitted that its free use may be occasionally dangerous.

> 'When the internal tunic of the rectum is much relaxed, and the discharge of blood or serous fluid is too great, or too long continued, it may be advisable to employ injections of a more astringent nature, as infusions of green tea, decoctions of oak bark, solutions of the sulphate of zinc, sulphuric acid in water, &c., but these should not be used without necessity, and always with caution.'—p. 80.

He recommends highly the use of supertartrate of potass with or without sulphur in moderate daily doses—we are inclined to suppose similar doses of castor oil are equally beneficial—we have found the long-continued use of this article in small doses almost a specific for the disorder. He speaks doubtfully of the effect of Ward's paste, cubebs, and the like, the use of which we suspect to be equally unphilosophical and dangerous—certainly we should never think of employing them ourselves.

> 'In cases, however, in which the suppression of the attack is followed by violent pains in the abdomen, by hemorrhage from the lungs or stomach, or, in fact, by any affection that appears to be associated with it, it is generally advisable, not only to employ such means as the urgency of the case may require, but, if possible, to produce a revulsion to the vessels of the rectum. Warm stimulating fluids should be injected into the rectum, and the patient should sit over the steam of hot water. If these means fail, leeches should then be applied around the anus, or recourse may be had to electricity for the same purpose. The latter method is strongly recommended by Desault, who states that he has derived great advantage from it, both for himself and others.'—p. 83.

Of the advantage of these processes we cannot speak from experience.

The local treatment of hemorrhoidal tumours is considered under three heads, the application of particular substances, compression, and operations with the knife or ligature. He considers ointments of all kinds as nearly on a level in point of efficacy, attributing their good effects rather to their common power of excluding the air and promoting exhalation from the surface, than to any particular virtue in the ingredients—astringent and cold fluids are also powerful repellents.

Compression may be applied when the tumours are external by the hand, or by means of compresses. He mentions a simple method of preventing their formation, that is by pinching firmly with the fingers, 'the point at which from the slight degree of fulness and peculiar prickling sensation,' they may be expected to form. When the tumours are more internal they may be compressed by a rectum bougie, or wax candle—when they are situated high up, however, there is no very efficacious method of applying pressure. During a paroxysm of pain and tumefaction, when the tumours are severely strangulated by the sphincters and cannot be easily returned, it is of course best to produce a disgorgement, this may be effected by the lancet or leeches. Mr Calvert prefers the former, on account of the irritation from the bite of the latter.

> 'When, however,' says he, 'hæmorrhoidal swellings are large, painful, and retained with difficulty within the rectum, when they become ulcerated, are disposed to bleed frequently, and continue nearly stationary in respect to size, proving a source of great inconvenience, or even danger, and rendering the usual occupations of life almost impracticable, the only plan that remains, after having tried the means already mentioned, is, to remove them as speedily as possible, either by the knife or ligature.'—p. 96.

After examining the arguments in favor of each, he decides in favor of the knife, as most other writers have. The only objection of any consequence to the use of the knife, is the supposed danger of hemorrhage and this dread he seems to consider very ill-founded—he thinks the instances of fatal bleeding on record must have happened in cases of hemorrhoidal varices and not in those of true piles. On the other hand very alarming symptoms have followed the use of the ligature, when any part of the fine skin about the anus has been included in it. 'When the basis of the tumour is attached higher up to the mucous coat of the rectum, and it can be firmly compressed by the ligature, alarming symptoms rarely or never supervene.' But even in most cases of this sort, it is easier and if many judicious writers can be depended on, no more dangerous, to cut off the tumours at once, with the knife or scissors.

Strictures of the Rectum.—These form the subject of the second chapter; it is interesting, but our limits will not permit a full abridgment. Mr Calvert shows that several species of stricture may exist, beside the carcinomatous one, which is of course incurable. The existence of stricture is to be suspected under the following circumstances.

'First, An unusual distension of the colon, so that, on placing the hand upon the abdomen, it may be felt loaded with wind and scybalæ, which, being intermixed by external pressure, or by the natural action of the gut, produce a kind of rumbling sound. Sometimes this distension is obvious to the patient, from an increase of sensibility in the part, giving rise to the sensation of a tight bandage over the abdomen. Secondly, The pain, which, in many cases, when the disease has made some progress, is felt more or less about the junction of the last vertebra with the os sacrum, extending sometimes downwards as far as the feet, and chiefly in the direction of the large nervous trunks. Thirdly, The tenesmus, which is not accompanied with much irritation, or continued after a sufficient evacuation has been produced, as in cases where it appears more suddenly, and proceeds from an inflammation or ulceration of the internal membrane of the rectum, but unless in the ulcerative stage of malignant stricture, amounts to little more than a teasing desire, without the power to discharge the matter accumulated above the stricture. In this case the force of the abdominal muscles is not directed upon the orifice of the rectum, but upon the distended gut above the stricture; there is, in consequence, less pain immediately about the anus, and less disposition to prolapsus. Fourthly, The scanty motions, and their irregular or figured appearance. The latter effect, however, is not always present throughout the disease; for if the contraction be at the upper part of the rectum the motions may be of the usual size and appearance; a circumstance which is owing, either to the excrement being forced through the stricture in too small a quantity to stimulate the rectum at the moment, or to the lower portion of the gut having lost the power of contracting unless when fully distended.'—pp. 146—148.

In all such cases careful examination should be made by means of the finger, the bougie, or the speculum ani, as circumstances require.

'There is generally, unless at the very commencement of the disease, more or less of a burning sensation, or acute shooting pains at the seat of the disease. All the sympathetic phenomena are more conspicuous, at least such as can be traced more immediately to the seat of the disease; the patient consequently suffers more from pain in the back, with bearing down if a female; and the retention of urine, from the state of the muscles about the urethra and neck of the bladder, is much more frequent and distressing in this than in the other forms of stricture; he cannot sit down, and becomes excessively anxious and restless.'—pp. 148—149.

In these cases the use of the bougie is painful, useless and of course inadmissible—in most others it may be used with good effect. The general rules for its use, whether in examination, or as a remedy, are so similar to those in the case of strictures of the urethra that it is unnecessary to dwell upon them. When the stricture is merely a narrow septum within reach of the finger it may be divided by the bistoury, and the cure completed by keeping the bowels open, avoiding unnecessary irritation and by the use of the bougie.

Lastly, intus-susceptio, mechanical obstructions of the rectum by hardened fæces, concretions, retroversion of the uterus and the like may be mistaken for stricture and the reverse—but the unhappy effects of such errors need no comment.

Morbid contraction of the Anus.—Several varieties of disease are described under this head. The first consists in 'a thickening and gradual disorganization of the fine skin within the anus, extending from the external margin to the lower part of the rectum. The surface is rough, and partially ulcerated, with an unhealthy discharge; and, in some cases, the thickening of the skin is not only deep, but has almost a cartilaginous hardness.' This variety Mr Calvert supposes to be in some way connected with syphilis and to be incurable. Another kind 'is merely a thickening and consolidation of the fine skin of this part, and of the adjacent cellular membrane, without any disposition either to spasm or to specific structural disease.' This does not usually cause much inconvenience, but may increase if not attended to, and end in fissures and troublesome ulcerations. Another variety arises 'solely from the state of the sphincter muscles, the fibres of which being over-distended, or ruptured by the passing of hardened fæces, become sensibly contracted in consequence, and are painful when any attempt is made to distend them.' This, after the first tenderness is past, is found to yield readily to the bougie. Again,

> 'The orifice of the rectum, in consequence of inflammation, becomes rigidly contracted, and coagulable lymph being thrown out upon its surface, becomes organized, and is drawn out into shreds, by which the passage is almost completely obliterated. The commencement of the complaint is marked by severe pain, particularly when at stool, with almost continued and distressing tenesmus; but sometimes it is of a more chronic nature. Sometimes, from the same cause, or from spasm, the immediate consequence of metastasis, there is a continued contraction, as in the cases recorded by Hoffman, G. C. Schmidt, and other writers, the muscular fibres of the anus and rectum being chiefly affected, whilst, on other occasions, there has been little contraction, but considerable derangement in consequence of the thickening, and from effusion of lymph over the inner membrane. In this state of the parts, fatal obstruction, either from the formation of adhesions, or muscular contraction, may take place within a short time; and whenever obstruction in the bowels has been preceded by tenesmus and pain in the rectum, this should be examined before any purgative remedies are exhibited.'—pp. 208, 209.

This chapter, however, is principally devoted to the consideration of the spasmodic contraction of the sphincter muscles.

> 'In the few cases' says our author, 'which I have seen of this complaint, unconnected with hæmorrhoids, it appeared to have commenced with some degree of smarting pain, and feeling of resistance at the orifice of the gut during an evacuation. After some time the difficulty of voiding the fæces become much worse, and every motion was succeeded by a violent and almost insufferable pain about the anus and lower part of the rectum, particularly if the bowels were at all constipated. On examination, the stools were found exceedingly small, flattened, and, instead of being forced out perpendicularly, appeared to have taken a curved or spiral direction. The state of the fæces, however, was not always uniform, even in the same case, inasmuch as they were sometimes considerably larger than they had been previously, whilst, on other occasions, they were as fine as the smallest tape: in the former case they were often emitted with a degree of rapidity and violence, but, in the latter, very slowly, and with great exertion.'—p. 211.

> 'In general, the pain comes on soon after the patient has had a motion, continues for a short time, and does not return until the following day, or still later, if the bowels are not moved in the interim; but in very irritable habits it may be produced by the slightest causes, as in the disengagement of wind, a more than usual exertion, passions of the mind, or by any cause whatever that produces a local or general excitement. Sometimes it is so severe, that it is

more intolerable than the pains of labour; and, in one instance I have seen it give rise to loud expressions of agony from the most determined fortitude.

'In some cases the paroxysms of pain do not always succeed the alvine discharges, but assume a periodical character, returning every day, usually in the evening, and apparently without the intervention of those causes which precede it on other occasions; the interim being spent in that delicious calm, which usually follows upon violent suffering, and which may be termed, not inaptly, the very luxury of sensation, whilst in other cases there is always more or less aching pain, numbness, and uneasiness; and the paroxysms are quite irregular in their occurrence.

'The degree of contraction is not always in proportion to the suffering of the patient; but when in this complaint the sphincters are rigidly contracted, intense pain is almost the necessary consequence of any thing that irritates the anus, or produces dilatation suddenly. If in this state the finger be introduced within the anus, the external sphincter muscle is found to encircle the orifice like a thick unyielding ring; and higher up the parietes of the gut feel more than usually firm and solid, when pressed against by the point of the finger, from a similar development and contraction of the muscular fibres of the internal sphincter; whilst in some cases, where there is much vascular excitement, the contraction has been found to extend along the whole of the rectum.'—pp. 212—214.

This complaint seems to be peculiar to individuals of an irritable constitution, and those who are liable to painful spasms in other muscles. Mr Calvert thinks that

'Although this complaint sometimes occurs without any evident cause, and in persons who are apparently in good health; yet, from what I have seen of it myself, and from what has been related by others, I am inclined to think, that in the generality of cases it is the immediate consequence of local irritation from fissure, hæmorrhoidal tumours, and similar causes, or of violence from over-distension in the passing of indurated fæces, particularly when combined with a low and irritable state of the constitution. On the other hand, when the paroxysms of pain and spasm occur periodically, without the intervention of the above circumstances, and the inner membrane of the anus as well as the adjacent parts are free from disease, the complaint can only be considered as depending upon the state of the general health, favoured by a peculiar predisposition, or perhaps by original malformation.

'Sometimes it is consequent to, or sympathetic of, diseased action higher up in the gut; and hence it is very often found combined with the different forms of stricture of the rectum.'—pp. 220, 221.

With regard to the cure of these affections, when contracted anus is connected with induration, which is merely the consequence of inflammation, we are to correct the torpid state of the bowels, which is usually the original cause of the complaint. When inflammation actually exists, leeches and fomentations are required. Hemorrhoidal tumours, or excrescences, where they act as a source of irritation are to be removed with the knife—and fissures should be touched with the sulphate of copper, or nitrate of silver. In cases of spasmodic contraction, the division of the sphincter muscles by the bistoury has been highly recommended as a radical cure. The propriety or even advantage of this severe method in many cases is doubted by Mr Calvert, and his experience does not enable him to speak decidedly concerning some other methods. He speaks highly of the use of cold water, either by injection, or by dashing it upon the loins. When the symptoms have an inflammatory appearance, general blood letting, leeches and fomentations will be necessary and in some cases of long continued and severe spasms, it is obvious that the sphincters must be divided. Fortunately this is a rare disease.

Prolapsus ani.—This chapter contains a good account of the disease and the best methods of relieving or curing it. It seems, however, to have been inserted rather for the purpose of completing the subject, or perhaps making the book, than for any new or interesting remarks contained in it. Such of the observations, as have not frequently been published before would probably suggest themselves to any judicious practitioner, who was tolerably well skilled in the anatomical structure of the parts.

The account of *Fistula in ano*, in like manner though minute and on the whole interesting, as it serves to refresh the memory with regard to many particulars, cannot be said to contain much that is new or highly important to a practitioner of any considerable experience in the treatment of this disease.

The following remarks on the hemorrhage, which is apt to occur after this operation, appear to us to be worth extracting.

> 'Considerable inconvenience sometimes occurs from hæmorrhage, when the knife is employed in cases of deep-seated fistulæ. This generally takes place an hour or two after the operation, and although it may not be dangerous, yet it is often sufficiently alarming to require the strictest attention. Hemorrhage in such cases is generally owing either to the division of some of the principal arterial ramifications, or, what I believe to be much more frequently the case, it is caused by the means that are made use of to arrest or prevent it. If, after the operation, the divided parts are allowed to bleed for a short time, the wound is not too much crammed with dressings, and the patient is kept cool and quiet, bleeding will very rarely occur to any considerable extent; but when the contrary method

is pursued, it is almost a necessary consequence; and if, under such circumstances, an attempt be made to check it, the evil is often increased instead of remedied.

'The occurrence of hemorrhage, from the injudicious use of compresses, must have been remarked by the experienced surgeon in many other cases; and, indeed, wherever pressure cannot, from the situation of the parts, be applied so as to arrest the course of the circulation in the larger branches, it will generally augment the discharge by heating and irritating the wounded surface, which produces an increased determination of blood to the capillary vessels.

'When the hemorrhage cannot reasonably be attributed to causes which have produced a temporary excitement in the wounded parts, we may conclude that it proceeds from the division of one or more principal vessels, and we should endeavour to discover the point from which the blood issues, with the improved speculum ani. This has many advantages over that of former construction; by opening the blades of the instrument, after it is introduced within the gut, a considerable surface is exposed, and we may probably succeed in taking up the bleeding vessel, or in applying the actual cautery to the same part, if it is too deep to make use of the tenaculum. The actual cautery, when applied with dexterity, is by no means so painful as may at first view be conceived, in cases of deep-seated hemorrhage; and its avowed utility is a sufficient and the best apology that can be offered for having recourse to a practice, that has been denounced as the relic of barbarism and ignorance. It should be recollected, that sensibility is the most acute where it is most wanted, namely, on the surface of the body; that within the rectum, as at the base of a deep wound, the application of the heated wire is scarcely perceptible.

'Unfortunately, however, in consequence of the difficulty of obtaining a perfect view of the parts, the hemorrhage cannot always be stopped by the above means, in which case we must have recourse to the application of pressure in the best manner that the unfavourable situation of the parts will admit. The method recommended by Petit, and so often alluded to by other writers, is very troublesome, and cannot be adopted at the moment.* A much more simple and efficacious plan, and which has been found to succeed when the former had been employed to no purpose, consists in introducing the centre of a square piece of linen within the rectum, on the point of the fore-finger, and filling the sac thus formed with lint. The compression is then increased by drawing the four corners of the linen forwards and cross-wise, whilst, with the fingers of the left hand, pressure is opposed to extend the mass of lint, and also to prevent its being pressed solely against the anus. This plan I have made use of myself, and I think that in most cases of hemorrhage, proceeding from the lower part of the rectum, it will be found to answer the purpose.

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* The following is the description given by that author of the manner in which he recommends pressure to be applied in cases of hemorrhage from the rectum:—'With some lint I form an oblong plug, neither too hard nor too soft; over one end of this I pass two pieces of string, tie them at the other end, and to keep them fixed I apply around them several long slips of lint, from one end to the other. The four ends form one cord, which should be at least eight or ten inches long. I moisten the interior of the anus, and the outer part of the ball of lint, by which means I am enabled to introduce it with ease within the anus, above the sphincter, or as far as the open vessel. This plug is sufficiently large to fill the intestine, but, not to stop the bleeding. To effect this I take another plug of lint, across which I pass the cord of the former, which I hold firmly with one hand, and draw it forwards, whilst with the other I press upon the external plug, as i I wished to push it within the rectum. The pressure is so much the greater in proportion as the external plug is forced in the opposite direction; and in this way the vessel is pressed upon by three powers, namely, by the extension of the internal plug, by its in-

'Hemorrhage, under similar circumstances, may be owing to another cause, unconnected with the mere division of the parts; it may proceed from the surface of an hæmorrhoidal tumour, which existed previously, but has been suddenly developed by the effects of the operation upon the vessels of the rectum. This, however, is merely an accidental occurrence; but as considerable hemorrhage at other times often arises from this source, I may be allowed a short digression. If we can succeed in obtaining a view of the tumour, the blood may be discovered to proceed from one or more minute orifices on the surface; pressure will be of very little service in this case, and the tumour should either be included in a ligature, or the bleeding may be stopped by applying some strong styptic, or a red-hot knitting-kneedle, to the point from which it proceeds.'—pp. 314—319.

Ulcers of the rectum.—Several varieties of this disease are noticed—the practice in all is founded essentially upon general principles, inordinate or irregular actions of the intestine are to be suppressed or corrected—unhealthy secretions improved and the ulcerated surface, defended as far as possible from abrasion—indolent ulcers are to be excited by caustic applications and irritable ones soothed by narcotics. The greatest attention of course in all instances of this sort is to be paid to diet, as irregularities in this particular must defeat any plan of cure. Where the ulcers are of a syphilitic character, the usual remedy will of course be required.

Excrescences, &c. about the anus.—These may be removed by the knife, the ligature, or corrosive applications. They are very frequent and often troublesome though seldom attended with any serious difficulty or danger.

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clination from above downwards, and by the pressure of the external plug in the opposite direction. The string which hangs from the anus I wrap in some linen, and fold upon the lint, which forms the outer plug. I then cover it with several compresses, and with the T bandage, by which means the cord is so fixed, that the two plugs cannot separate from each other.'

SELECTIONS.

Review of '*Observations on Extraction of Diseased Ovaria; illustrated by Plates Coloured after Nature.* By JOHN LIZARS, Surgeon, Author of the System of Anatomical Plates, &c. Edinburgh, Folio. Lizars. 1825.'

[From the Edinburgh Medical and Surgical Journal.]

THE surgery of the present age is characterized by its boldness. Operations which were not even dreamt of as practicable by our predecessors, are now daily performed, and what is of greater importance, successfully performed. The surgeons of the New World vie with those of the Old, and country practitioners do not yield in science or dexterity to those of the metropolis.

The subject of the present communication is already known to our readers, by the interesting communication inserted in our LXXXI Number, page 217, in which Mr Lizars gave a detailed account of his first operation for the removal of diseased ovaries by gastrotomy; and although from a singular circumstance to which we shall presently allude, the object of the operation was not attained, its practicability in proper cases was demonstrated, and the safety of laying open the abdominal cavity, and handling the viscera with freedom, made manifest, contrary to the doctrines of the schools.

We confess that we were among those who strongly dissuaded both the patient from submitting to, and the operator from undertaking the operation; and we can bear testimony to her fixed determination, that if no regular and scientific surgeon would venture upon it, she would have recourse to a country bone-setter, 'who,' she said, 'would make nae mains o't,' (not hesitate about it.) Our reasons for discouraging the operation were not only the danger of inducing peritoneal inflammation, but the possibility, or rather the probability, that after the cavity of the abdomen was laid open, it would be found impracticable to complete the operation, in consequence of adhesions, enlargement of vessels and unexpected occurrences; for we were fully aware of the difficulty of determining, by any external examination however skilful, the exact state of the internal parts. We confess, indeed, that we did not foresee the possibility of so great an error in diagnosis, as that into which we ourselves and many surgeons of great experience fell, of supposing a diseased ovary to be the cause of a protruded abdomen, when in reality both ovaries were sound. Yet so it was; and it furnishes an additional reason against the undertaking of this operation, except under the most particular circumstances. Luckily, however, the patient is still alive, and does not repent of her urgency to have the operation performed, as it has satisfied her that every thing possible has been tried to relieve her from the inconvenience of a prominent belly.

Mr Lizars, however, has not been deterred by the want of success in his first attempt, from persevering in his endeavours to accomplish so great an object, as to remove a disease, rendering the remainder of life a burthen, and invariably terminating in a lingering death; and in the splendid publication before us, he gives an account of four cases, including that already published; in the second of which the operation was partially successful, in the third it proved fatal, and in the last, recovery has taken place, although it was found to be impracticable to remove the tumour.

As the first step towards overcoming the difficulties which embarrass an operator in his practice, is to be fully aware of their existence, and of the various forms and complications which they present, we shall extract the detail of those which occurred to Mr Lizars, reserving the successful case to the last.

Case III.—J. C., a cookmaid, 25 years of age. Disease of one year standing, and health of late very bad.

'On Tuesday the 22d March 1825, between one and two o'clock, the room having been previously heated to 75° of Fahrenheit, I commenced the operation, by making an incision through the skin and adipose substance, from the sternum to the symphysis pubis; then through the muscles and peritoneum, near the sternum, so as to get at once into the abdominal cavity; but the tumour approached so near the sternum, that I could not accomplish this, so that I cut through the tendons of the external oblique, internal oblique, and rectus muscles, imagining I had got to the surface of the tumour, and was proceeding to separate the parietes from the tumour, when I observed my mistake. I accordingly deepened the incision through the posterior tendinous layer of the internal oblique and transversalis muscles, and arrived at the sac of the tumour; I then began to insulate the tumour, which was found adhering so strongly to the parietes of the abdomen, to the colon, and to the brim of the pelvis, that I despaired of being able to detach it; however, by dissecting at one time, and tearing cautiously with the fingers at another, I succeeded in insulating a large mass of a dark-brown colour, weighing upwards of seven pounds, and, to my delight, having a pedicle only the thickness of the little finger, and between one and two inches in length. I now gave this enormous mass to my assistant, Mr Macrae, passed a ligature round the pedicle, and tied it firmly, and then cut close to the tumour; securing three open-mouthed vessels of the pedicle. During this period, which occupied, I understand, about ten minutes, my friend, Dr Poole, kept the omentum and intestines enveloped in a towel dipt in water at 96°. I now stitched up the wound, carefully avoiding the intestines and omentum, applied straps of adhesive plaster, compresses of lint and linen, and around the body a shawl like a binder after accouchement; and, lastly, carried my patient to bed.'

This patient died on Thursday 24th, at 7 *p. m.* of peritonitis, having survived the operation about 56 hours.

Case IV.—M. B. age 34, cookmaid, disease of six years standing. Operation performed on the 24th April 1825.

'The day was remarkably cold for the season, for although a large fire had been put on by seven in the morning, the thermometer had arisen only to 66° by one o'clock. When the heat of the room had arisen to 70° of Fahrenheit, which was between one and two o'clock, a longitudinal incision was made through the integuments, from the sternum to the pubes: at the sternal extremity the peritoneum was wounded, and one finger of the left hand was here introduced, then another, and the peritoneum laid open to the pubes: the same was then done upwards to the sternum, when a multiplicity of convoluted vessels presented themselves of various magnitude, from the thickness of a finger to that of a crow's quill. At first I thought them the intestines, for they appeared extremely fleshy: then I imagined them the blood-vessels of a placenta, which they still more resembled; indeed such was their resemblance to the vessels of that organ, that the same idea struck one and all of the gentlemen present. On minute examination, however, they were found to be the blood-vessels of the omentum majus, enormously enlarged, running on the surface, and into the substance of the tumour, which appeared an enlarged ovarium. Finding that it was impracticable either to dissect these vessels from the surface of the tumour, or to secure them, in consequence of their great number, I abandoned the idea of extirpating the mass, in which decision I was supported by the gentlemen present; I therefore punctured with a large trocar and canula the centre of the tumour, but nothing flowed; I next made a small but deep incision with a scalpel, when the tumour appeared solid and cartilaginous, and a vessel bled a little: I lastly punctured the lower part of the tumour, being anxious to reduce its bulk, but only pure blood flowed. The lips of the wound were now approximated and stitched; adhesive straps applied, compresses of lint and linen, with a shawl as a binder, and the patient carried to bed.'

The reports are continued to May 7th, when the patient was convalescent, and, we understand, she continues to recover.

Case II. is that in which the operation was partially successful; we say partially, because although the one ovary was removed without any bad consequences to the patient from the operation, yet most unfortunately the other was diseased under such circumstances as to render its removal at the same time unadvisable. The patient was 36 years of age, and the case of six years standing.

'The day before the operation, she had a smart dose of the compound powder of jalap, which operated briskly. This day, Sunday, the 27th of February 1825, at 1 o'clock *p. m.* I began the operation, the patient being placed on her back, on a table covered with blankets, and the temperature of the room heated to 75° of Fahrenheit. The external incision having extended through the skin and adipose substance, from the ensiform cartilage to the symphysis pubis, a little on the left of the linea alba, I cautiously cut through the muscles and the peritoneum, near the umbilicus, making a small aperture into the latter, when the serous fluid flowed freely out, which was also collected by means of saucers and sponges: as the fluid ceased to flow, the wound was enlarged downwards. The whole measured about a gallon and a half. The wound was then enlarged upwards to the sternum, making that in the peritoneum correspond with the wound in the integuments; when the tumour appeared occupying the greater portion of the abdomen, and resembled the uterus in the eighth or ninth month of gestation, as represented in Plate I. I now laid hold of the tumour, brought it beyond the parietes of the abdomen, and gave it into the hands of my assistant, Mr Macrae, as its weight threatened to drag the uterus; I then passed my fingers around the pedicle, which appeared the broad ligament of the uterus, soft, flaccid, and healthy, and about an inch and a half in length, the fundus uteri being elevated about an inch above, or atlantad to, the crista pubis. A ligature, composed of two strong threads waxed, was next passed round this pedicle, and tied intermediate between the fundus uteri and the tumour, transfixing the pedicle between the noose of the ligature and the tumour, to prevent the noose slipping off. Lastly, I cut across the pedicle close to the tumour. During the progress of the operation, she complained of pain in the lumbar and sacral regions, which appeared to arise from the dragging of the tumour—a circumstance scarcely possible to be avoided, with all our care. My next object was to ascertain the condition of the uterus, as I was prepared to remove it had it been diseased; the uterus, however, was perfectly soft, and only a little enlarged. The other ovary was increased to nearly the size of the fourth part of the one removed, and was adhering on the right side to the parietes of the pelvis, and to the uterus, but comparatively free on the left side. While examining this, the gentlemen around me begged me to desist, in which I concurred, conceiving, that as the uterus was elevated above the brim of the pelvis, and the ovary not tied down by adhesions to the bottom of the pelvis, there might be hopes of its rising after the other had been detached, and that it might be extirpated afterwards. I now proceeded to bring the edges of the wound in apposition, by the employment of ligatures and adhesive straps; of the former there were seven, and of the latter nine, the wound itself being twelve inches. I regret that I employed so few ligatures, for in wounds of the abdomen they are particularly useful, to prevent any protrusion of the viscera, and to give support in all the motions of the abdomen during the cure. When the ligatures and adhesive straps had been applied, and the ligature encircling the pedicle carefully left out, compresses of lint and linen were put on, and the abdomen encirled with a shawl, as a binder employed after accouchement. This I found in the former case much more serviceable than a nine or twenty-tailed bandage, or stays, or any other fashionable dress.'

The only untoward circumstance which occurred was some hæmorrhagy in the evening, but it was checked by judicious treatment, and the case proceeded favourably. The last report is on the 9th of May, when the patient is convalescent.

In drawing a general result from the event in Mr Lizars's cases, we must remember, that the ovarian dropsy, if left to itself, is a mortal disease, of very slow progress, rendering the life of the sufferer for a great length of time miserable, both from actual distress and from dreadful anticipations, and that therefore any thing which presents even a chance of relief, is preferable to abandoning the individual to despair. Keeping this consideration in view, the result is rather favourable. Of four cases, one may be said to have proved successful, one died, and in two the operation was useless. We find from the records of surgery, that in general capital operations, on their first introduction, have been much less successful, even in the hands of the great and skilful surgeons, by whom they have been conceived and performed,* than they have afterwards become in the hands of the profession generally; and it would not be difficult to give the explanation.

But if we consider the operation of gastrotomy, independently of the single object of removing diseased ovaria, the result of Mr Lizars's operations is more favourable; for we here find, that of four cases, three succeeded, although in all the abdomen was freely laid open, and the viscera very freely examined; a success so great as to encourage us to believe that gastrotomy may be resorted to in many other cases of abdominal disease, as volvulus, intussusceptio, internal hernia, even external strangulated hernia—intestinal calculus, and in very obscure diseases of the abdominal and pelvic viscera, when no other hope presents itself.

We have now only to speak of the plates with which Mr Lizars's work is adorned; we say adorned, for they reflect the highest credit on Mr Lizars's brother, by whom they were designed, engraved and tinted. They are five in number, and all belong to the second or successful case. The first represents a view of the abdomen when fully laid open, exposing the tumour, intestines, and uterus, in their relative situations. The second is a lateral view of the tumour in its natural size; the third is a view of the basis of the tumour, showing the pedicle by which it was attached, and the Fallopian tube connected with it; the fourth is a section of the tumour, displaying its texture and structure; and the fifth and last is a view of the abdomen after the wound had healed, showing the cicatrix of the incision, and of the stitches, and the ligature still hanging out.

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* See observations in page 127, vol. 1, of Mr Harrison's Surgical Anatomy of the Arteries, a work replete with information and devoid of pretension, and which ought to be in the hands of every student engaged in dissection.

INTELLIGENCE.

MEDICAL GRADUATES IN HARVARD UNIVERSITY IN 1825, WITH THE SUBJECTS OF THEIR THESES.

Stephen Ball.—*On Croup.*
Joseph Clark.—*On Dysentery.*
Abraham D. Dearborn.—*On Concussion of the Brain.*
H. K. Emerson.—*On Hepatitis.*
Daniel Fisher.—*On Cephalitodes Ebriosus.*
John D. Fisher.—*On Paruria Erratica.*
Joshua B. Flint.—*On Sympathy.*
Thomas C. Folsom.—*On Delirium Tremens.*
Charles Jarvis.—*On Laryngitis.*
Henry Little.—*On Materia Medica.*
John Mason.—*On Delirium Tremens.*
Samuel B. Parris.—*On Symptoms.*
Horatio Robinson.—*On Colchicum Autumnale.*
John H. Richards.—*On Erysipelas.*
David H. Storer.—*On the Organ of Hearing in Fishes.*
Simeon Tucker.—*On Hydrocephalus Acutus.*
Hiram Watson.—*On Inflammation.*
Thomas Webb.—*On Uroplania.*
Willam Workman.—*On the Process of Digestion.*
Jacob Wyeth.—*On Necrosis.*

Boylston Medical Prize Questions.—At the annual meeting of the Boylston Medical Committee of Harvard University, holden on the 7th day of August, 1825, it was voted, that the Boylston Gold Medal, or fifty dollars in money, be awarded to the author of the best dissertation on the question, 'To what extent has the vaccine disease been found to be a preventive of the Small-pox?' The author was *John Bell, M. D.* of New-York.

No dissertation having been offered on the second subject, it was voted, to continue it for the year 1827.

The public is reminded that the questions on subjects for the year 1826, are the following, to wit:—

1. 'On the diseases resembling Syphilis, and the best means of relieving such diseases.'

2. 'Whether the Veins perform the functions of absorption.'

Dissertations upon these subjects must be transmitted, *post-paid*, to *David Townsend*, M. D. of Boston, on or before the first Wednesday in April, 1826.

To each dissertation must be affixed a device, or motto; and accompanying it a sealed letter containing the name of the author, and his place of residence. On the outside of this letter is to be written the same device or motto, which had been attached to the dissertation. No dissertation, which has the name of the author upon it, will be received. The successful candidate will receive the Boylston Gold Medal, or fifty dollars in money, at his option.

All unsuccessful dissertations are deposited with the Secretary, from whom the authors may obtain them, if applied for within one year after they have been received.

The subjects for the Prize Dissertations of 1827, are the following.

1. 'On the History of the Autumnal Fevers of New-England.'*

2. 'On Inflammation of the Periosteum, both acute and chronic.

Dissertations on these subjects must be transmitted as above post-paid, on or before the first Wednesday in April, 1827.

J. GORHAM, *Secretary.*

Plague and Yellow Fever.—The Paris Faculty of Medicine held an extraordinary meeting on Tuesday, under the Presidency of Baron Portal, for the purpose of receiving a letter from the Minister of the Interior, making known the different opinions which divide physicians upon the question whether the plague and yellow fever are or are not contagious. His Excellency at the same time laid before the Faculty letters from Drs Lassis, Coste, and Laserre, offering to shut themselves up in the lazaretto of Marseilles, and to wear the linen and garments of persons who have died of the plague or the yellow fever. A commission, consisting of six physicians, four surgeons, and two apothecaries, was appointed to examine the subject. Baron Portal communicated a letter from the Academy of Medicine at Marseilles, announcing that three young physicians of that place were willing to share the peril of the Doctors above mentioned, and even to taste the matter vomited by the patients. The report will be made at the next meeting of the Academy.

Death of Beclard.—The late Journals contain an account of the death, with some notices of the life and character of Pierre

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* It is not expected that writers on this subject should say any thing on the Remote causes, or Modes of Treatment of such fevers, as these will be proposed as questions for future dissertations.

Augustine Beclard, the celebrated French Anatomist and Surgeon. This has been pronounced the greatest loss which the profession has sustained, in France, since the death of Bichat. Beclard was born in 1785 and was the son of a respectable tradesman of Angers. He was designed by his parents for the same rank of life with themselves, but the fame of Bichat at that time filled all France; the ambition of Beclard was excited, and his talents and perseverance, enabled him, in spite of all the obstacles of his situation, to rise to the highest rank in his profession. In 1808, after passing four years in the Hospital at Angers, he went to Paris, where his abilities soon made him conspicuous. In 1818 after attaining a variety of honours in his profession, he was elected to the chair of Anatomy in the Faculty of Medicine of Paris.

'After attaining this important situation,' says one of his biographers 'he appears to have devoted his whole time and his whole soul to such a continued series of laborious studies, connected with his office of a teacher, as caused his lectures to be crowded with students, and eventually shortened his existence. Few men appear to have been more devoted to public duty, and more ardent in the pursuit of science, or more negligent of ornament, or more careless of the emolument which might have been derived by attending less to his pupils and more to the public. As a lecturer, he was clear and precise, without being ambitious in his style. His conception was rapid and powerful, his memory extensive, his judgment correct, and his elocution agreeable. His hearers forgot the professor amidst the richness and the beauty of science which he displayed to them; and some idea may be entertained of his industry by the fact, that, notwithstanding his great abilities and his long familiarity with his subject, the preparation for a single lecture, often occupied him four or five hours. He seems to have had a pure passion for science, unmixed with any strong desire for personal distinction; to have welcomed knowledge, from whatever quarter or country it came to him; and to have been uniformly more desirous to *learn* the truth, than to be the *discoverer* of it—an undoubted feature of a great mind.'

The private character of Beclard was not less worthy of eulogy than his professional. He appears to have secured the warm regard and friendship of his equals and the respect and affection of his pupils in no common degree. His health was in some measure impaired by the intensity of his application, but the disease of which he died is said to have been 'an acute cerebral affection accompanied with Erysipelas' which destroyed him in eleven days.

A variety of funeral honours were paid him and among the rest, several addresses were delivered at the place of interment in the name of the various societies and institutions with which the deceased was connected. The coffin was borne to the grave on the shoulders of medical students who were desirous of testifying in this way, their gratitude for his instructions and their respect for his memory.

Beclard was at the time of his death Professor of Anatomy to the Faculty of Paris. He published a number of papers, but he is principally known in this country, as the editor of Bichat's Anatomie Generale, to which he made numerous valuable additions and as the author of a work on General Anatomy for the use of his pupils.

The spring lancet invented by Mr Williams of Newport, is getting into extensive use in the Middle States. Dr Lovell, Surgeon General of the U. S. army has highly approved it, and ordered a very large number for the use of army surgeons. Dr Cutbush has also approved and ordered a large number of them. All vessels bound on distant voyages should be provided with these valuable instruments.

Medical School in Boston.—The Medical Lectures in Boston, will commence on the *third Wednesday* in November.

Anatomy and Surgery, by Dr Warren.
Chemistry, by Dr Gorham.
Midwifery and Medical Jurisprudence, by Dr Channing.
Materia Medica, by Dr Bigelow.
Theory and Practice of Physic, by Dr Jackson.

Gentlemen attending the Medical Lectures, are admitted *gratuitously* to the surgical operations and clinical practice of the Massachusetts General Hospital

LIST OF NEW PUBLICATIONS.

AMERICAN WORKS.

Fauna Americana: being a description of the Mammiferous animals inhabiting North America. By Richard Harlan, M. D. Prof. of Comparative Anatomy to the Philadelphia Museum, &c. &c. Philadelphia. A. Finley, 1825. pp. 318.

Typhus Syncopalis, Sinking Typhus, or the spotted fever of New-England, as it appeared in the epidemic of 1823, in Middletown, Connecticut. By Thomas Miner, M. D. Middletown (Conn.) Printed for the author.

On the Surgical Anatomy of the Groin, as connected with Hernia of the abdomen. By Alexander F. Vache, of New-York. 1825.

An Analysis of the mineral waters of Saratoga and Ballston; with practical remarks on their Use in various Diseases; containing observations on the Geology and Mineralogy of the surrounding country. By John H. Steel. 2d edition. 18mo. pp. 113. G. M. Davison. Saratoga Springs.

Remarks on the Disorders of Literary Men, or an inquiry into the means of preventing the Evils usually incident to Sedentary and studious habits. 12mo. pp. 92. Boston. Cummings, Hilliard, & Co. 1825.

Contributions to Physiological and Pathological Anatomy. By John D. Godman, M.D. Philadelphia.

AMERICAN EDITIONS OF FOREIGN WORKS.

Manual of Anatomy by John Shaw. Revised, and with notes by Wm. Anderson, M. D., Author of a treatise on Surgical Anatomy. First American Edition.

The Surgical and Physiological works of John Abernethy, F. R. S. &c. &c. from the sixth London Edition. Embracing reflections on Gall and Spurzheim's system of Physiology and Phrenology. 2 vols. 8vo. Hartford.

An Elementary System of Physiology. By John Bostock, M. D., &c. vol I. 8vo. Boston. Wells and Lilly. 1825.

The Lectures of Sir Astley Cooper, Bt. F. R. S., on the Principles and Practice of Surgery; with additional notes and cases. By Frederick Tyrrel. vol. I. 8vo. Boston. Wells and Lilly. 1825. Vol. II. in Press.

Elements of Physiology. By A. Richerand. Translated by G. L. M. De Lys, M. D. With notes and a copious Appendix. By James Copland, M. D. 8vo. New-York. W. E. Dean.

FOREIGN WORKS.

System of Anatomical Plates, with descriptive letter-press. By John Lizars, F. R. S. E., &c. &c. Part VII. the Brain, first portion, coloured after nature, 7 plates folio. 18 pp. text. 8vo. Edinburgh. 1825.

The Study of Medicine: 2d Edition. By John Mason Good. 5 vols 8vo. London. 1825.

The Surgical Anatomy of the Arteries of the human body, designed for the use of students in the dissecting room. By Robert Harrison, &c. 2 vols. vol. II. 12mo. pp. 215. Dublin. 1825.

Part Second of a series of Elementary Lectures on the Veterinary Art, wherein the Anatomy, Physiology and Pathology of the Horse are essayed on the general principles of Medical Science. By William Percival, M. R. C. S. London. pp. 559. 8vo. 1824.

Illustrations of Acoustic Surgery. By Thomas Buchanan. pp. 118. 8vo. London. 1825.

Academical examinations on the principles of Chemistry, being an Introduction to the Study of that Science. By David Boswell Reid. 2 vols. 8vo. Edinburgh. 1825.

A letter to Sir Henry Halford, Bt., proposing a method of inoculating the small-pox, which deprives it of all its danger, but preserves its full power of preventing a second attack. By R. Ferguson, M. D. 8vo. pp. 38. London. 1825.

Instructions to Mothers and Nurses on the management of children in health and disease; comprehending directions for regulating their diet, dress, exercise, and medicine; with a variety of prescriptions adapted to the use of the nursery, and an Index of medical terms. By James Kennedy, M. D. 8vo. pp. 329. Glasgow and London. 1825.

An Essay on Tetanus, founded on cases and experiments. By Joseph Swan. 8vo. pp. 98. London. 1825.

Practical Remarks on laceration of the Uterus and Vagina: with cases. By Thomas McKeever, M. D. 8vo. pp. 82. 1824.

Observations on the Cholera Morbus of India: a Letter addressed to the Hon. the Court of Directors of the East India Company. By Whitelaw Ainslie, M. D. 8vo. pp. 90. London. May, 1825.

Further Observations on the lateral or serpentine curvature of the Spine, and on the treatment of contracted limbs, &c., being a supplement to the work on the Distortions of the Spine, and bones of the chest. By John Shaw, Surgeon, &c. 8vo. pp. 195. Wood cuts. May 1825.

Obstetric Studies: comprehending a Treatise on Parturition: likewise the various accompanying symptoms during pregnancy, and subsequently to labour; with descriptive references to a series of plates published as a separate work. By James Hogben, Surgeon.

Anatomical Tables of the Human Gravid Uterus, containing nearly thirty plates divided into two classes. I. Represents the different presentations and progressive stages of natural labour. II. Contains a variety of anatomical subjects. By James Hogben.

Observations on the extraction of Diseased Ovaria. Illustrated by plates coloured after nature. By John Lizars. Folio. pp. 24. 5 plates. Edinburgh and London. 1825.

A popular explanation of the Elements and general laws of Chemistry. By Walter Weldon. 8vo. pp. 622. London. June 1825.

Parental Guide, during the progress of the Cow Pock disease. By Joseph Morley. 8vo. pp. 40. With a coloured plate.

A letter to the Right Hon. W. Huskisson, on the Quarantine Bill. By A. B. Granville, M. D., &c. 8vo. pp. 16.

A brief sketch of the progress of opinion on the Subject of Contagion; with some remarks on Quarantine. By William Macmichael, M. D., F. R. S., &c. 8vo. pp. 32. June 1825.

Small Pox and Cow Pox: comprehending a concise history of those diseases, &c. &c. By John Jennings Cribb, M. R. C. S. pp. 80. Cambridge and London. 1825.

Essay on the causes and treatment of lateral curvature of the human spine. By Robert Knox, M. D., &c. &c. 8vo. pp. 52. Edinburgh. 1825.

Practical Directions for preserving the teeth; with an account of the most modern and improved methods of supplying their loss; and a notice of an improved artificial palate, invented by the author. With plates. By Andrew Clarke, Dentist. 8vo. pp. 96. London. 1825.

Practical observations on Vaccine Innoculation, illustrated by facts; with some account of the late reappearance of the Small Pox in the neighbourhood of New Castle-upon-Tyne, and the probable extent of its ravages; by John Daglish. 8vo. pp. 48. London. 1825.

Third Vindication of the General Penitentiary being an answer to some observations contained in a work published by P. Mere Latham, M. D., entitled 'an account of the disease lately prevalent at the General Penitentiary.' By George Holford, M. P. 8vo. pp. 156. London. 1825.

The Lectures of Sir Astley Cooper, Bart., &c. on the Principles and Practice of Surgery: with additional notes and cases. By Frederick Tyrrel, Esq., Surgeon to Saint Thomas' Hospital and to the London Opthalmic Infirmary. vol. II. 8vo. pp. 460. (Plates.) 1825.

A History of the Schools of Medicine of Holland and Belgium. By Edward Jones, M. B., &c.

A Treatise on the different methods of investigating Diseases of the Chest, and of their application to the diagnosis in those diseases. Translated from the French of M. Colin. With an additional preface, pointing out the most familiar and easy way of acquiring a knowledge of the use of the Stethoscope. By W. N. Ryland, M. D. 18mo. pp. 70. London. 1825.

Observations on Gout, critical and pathological; or an analytical survey of the views at present entertained of the nature of that disorder; with critical remarks on the injurious effects of Colchicum, and on certain modes of diet. By A. Rennie, Surgeon, &c. 8vo. pp. 190. London. 1825.

Practical observations on Hydrocele; with a view to recommend a new mode of operating for that disease. Illustrated by cases. To which are added, some practical observations on Bronchocele, and on inflammation of the Mamma. By James Holbrook. 8vo. pp. 107. London. 1825.

Observations on medical appointments to Charitable Institutions; with remarks on the System of Professional Education. By William Gill, Surgeon. 8vo. pp. 37. Liverpool. 1825.

A probationary Essay on the Extraction of Calculi from the Urinary bladder, containing some account of certain methods that have been recently proposed. By William Thomson. pp. 50. Edinburgh. 1825.

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ERRATA.

Page 117, at the bottom; for Dr John Dury, read Dr John Drury. Page 118, line 18th, an asterisk after 'muriat.' Page 125, 20th line from bottom, for 'contractability,' read contractility. Page 408, 9th line, after 'is,' add sometimes.

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